

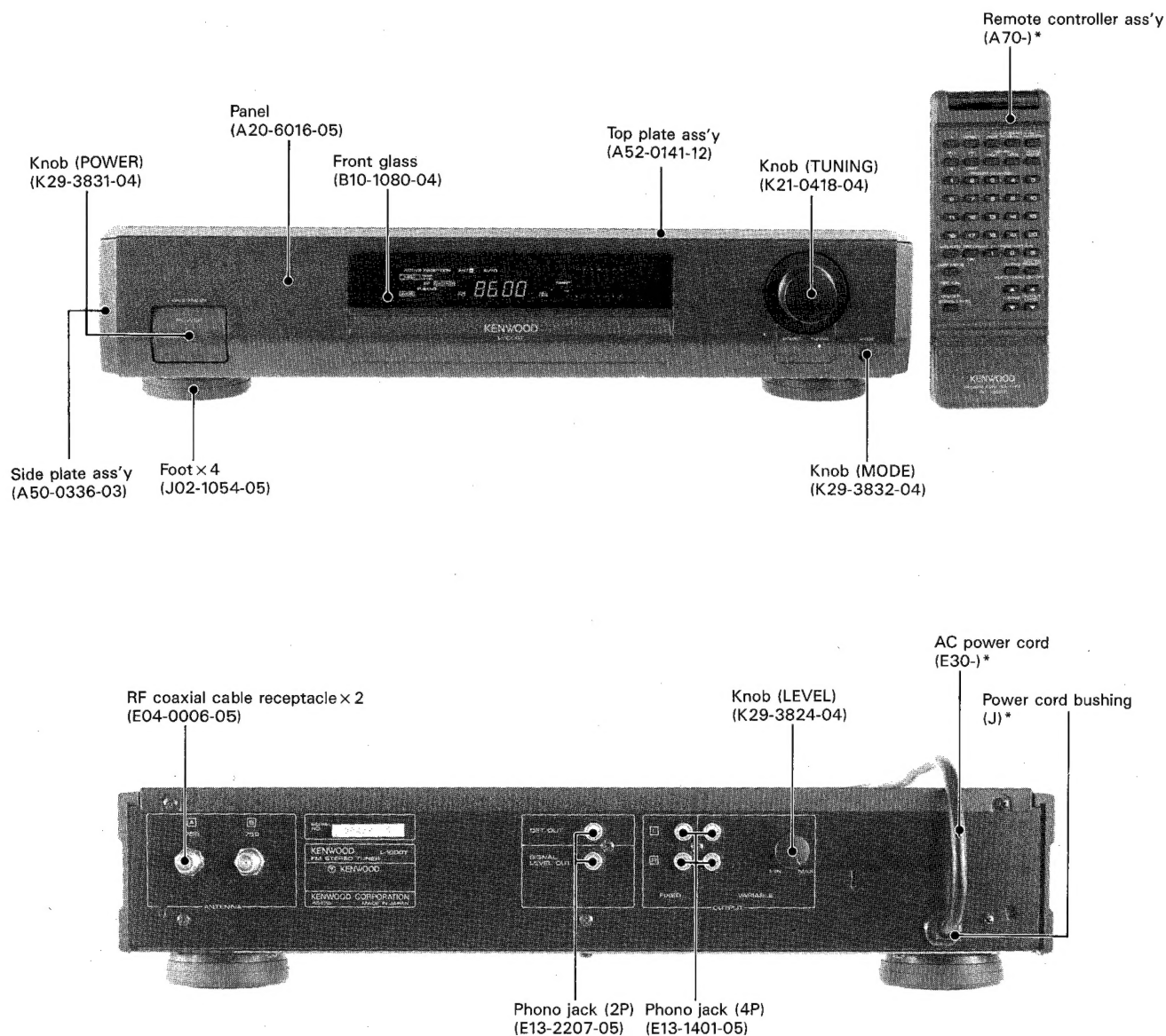
FM STEREO TUNER

# L-1000T

## SERVICE MANUAL

# KENWOOD

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B51-4054-00(T)3170



\* Refer to parts list on page 41.

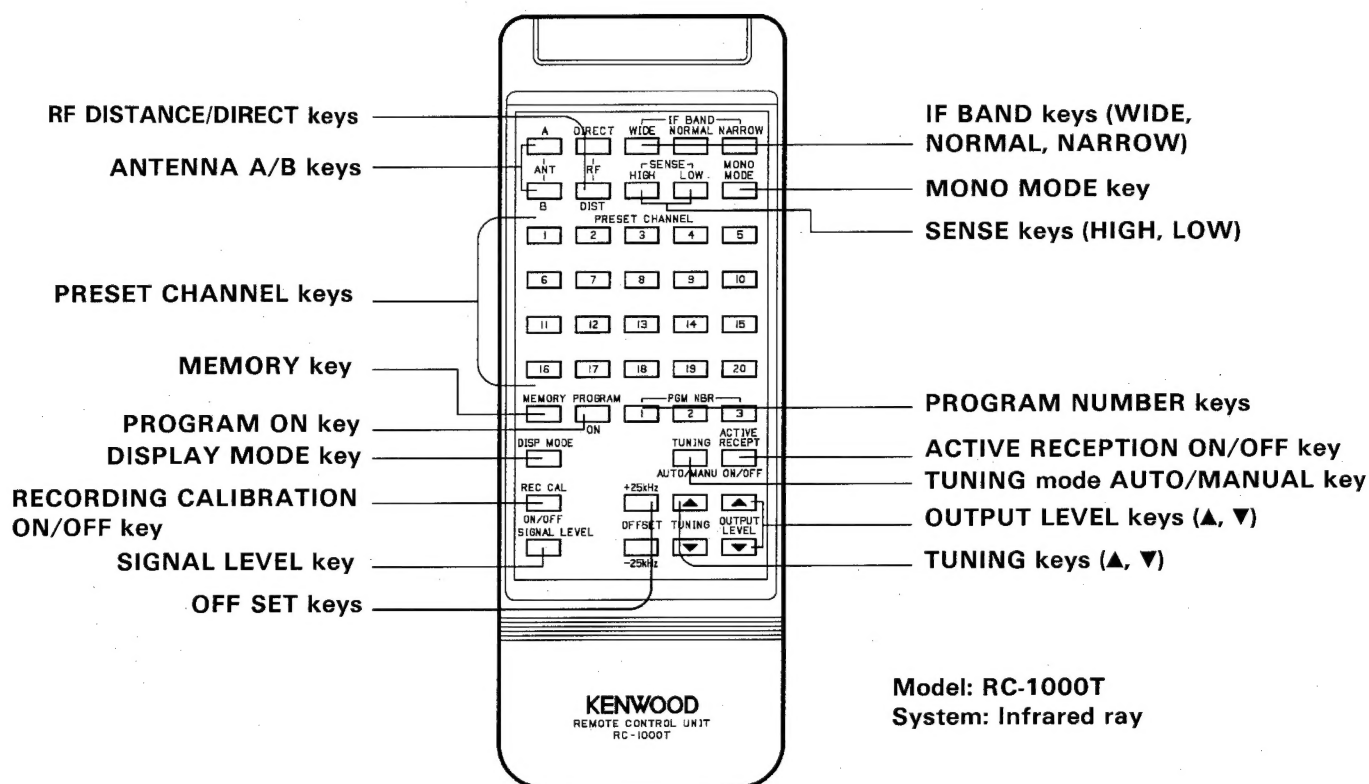
# L-1000T

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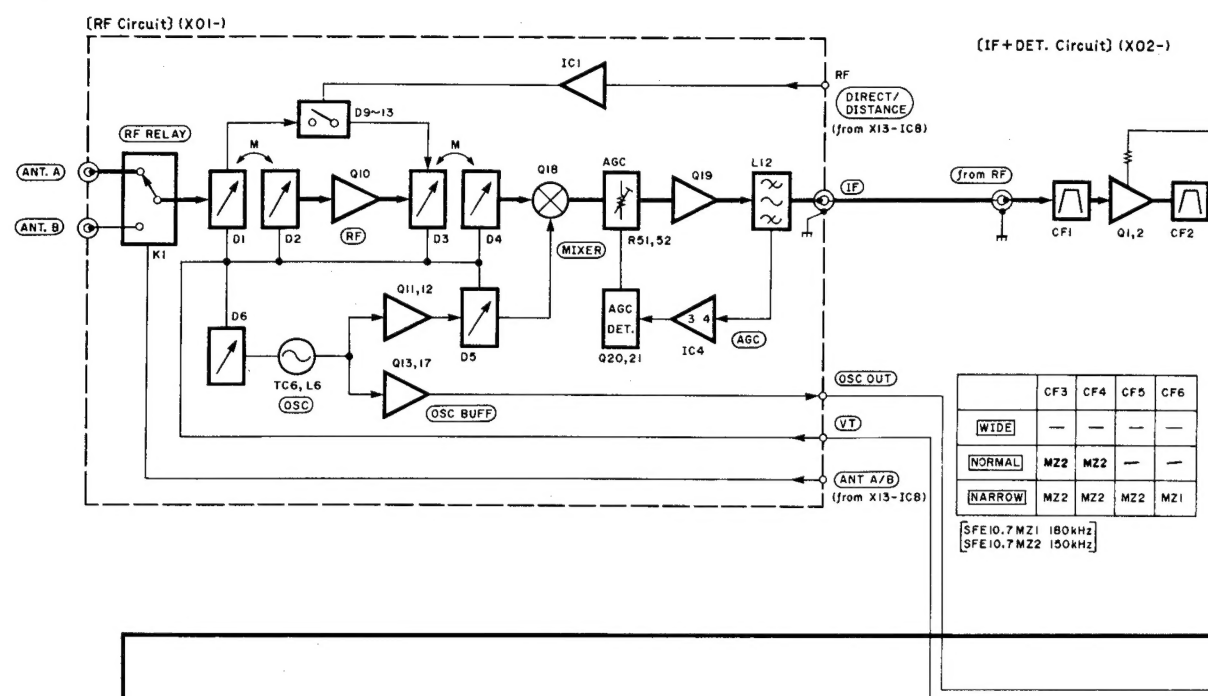
## REMOTE CONTROL UNIT

### ■ Names of controls



# L-1000T

## BLOCK DIAGRAM



# L-1000T

## CIRCUIT DESCRIPTION

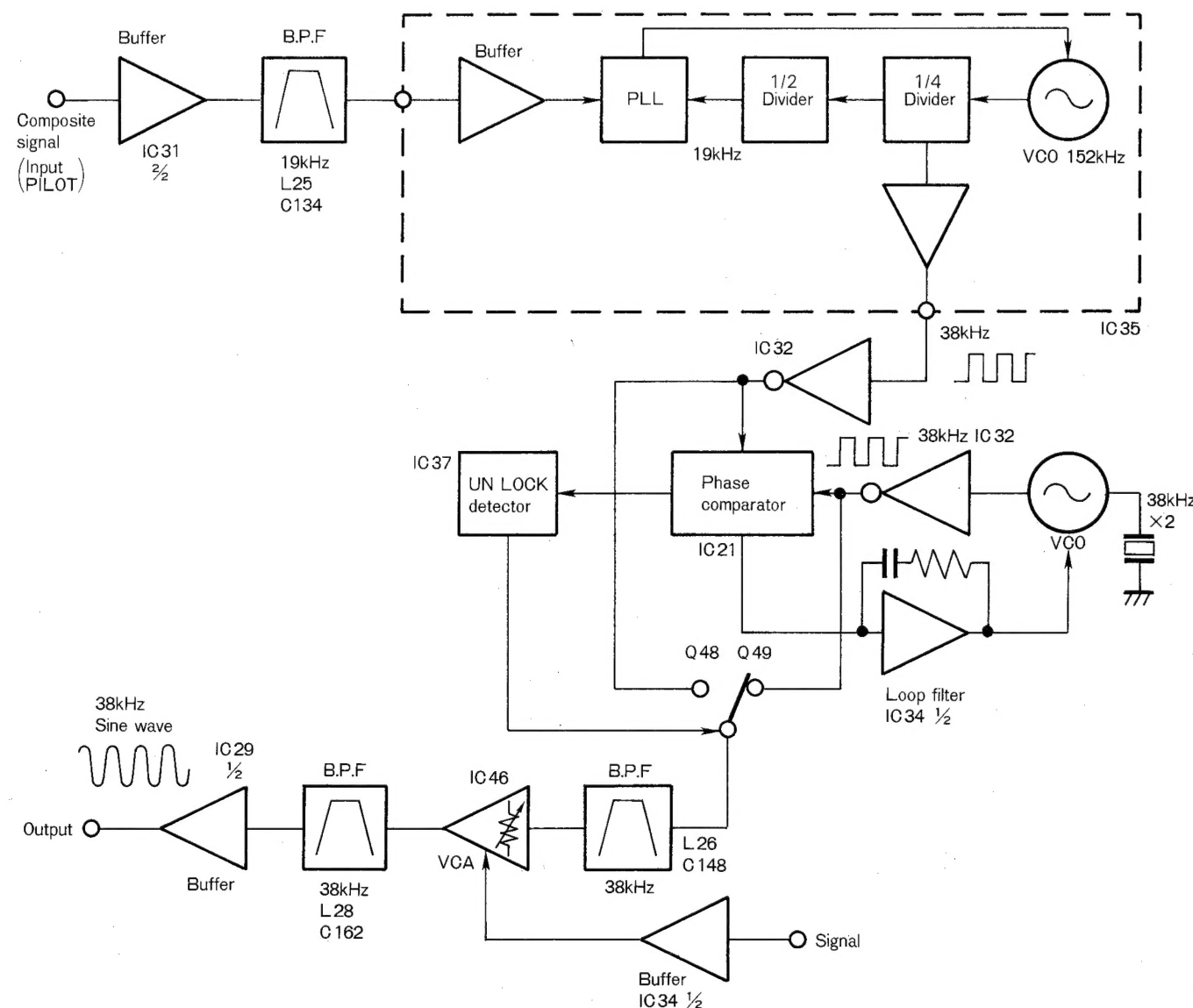
### 1. VCXO MPX (X02-1242-70)

The square waves of 38 kHz which is synchronized with input pilot signal (19 kHz) is provided by means of IC35.

This signal of 38 kHz is normally input into the demodulation circuit (multiplier) as it is. L-1000T, however, substitutes it for sub-carrier (38 kHz) with less jitter through a crystal oscillation in order to use the circuit which receives more pure demodulation signals of L and R.

The phase comparison of VCXO section is performed by digital (square waves). Because of the range of change in frequency of crystal vibrator (X2) is about from 2 Hz more or less from 38 kHz, PLL is being unlocked if the input pilot signals deviate from the 19 kHz by the range of 1 kHz more or less. Then, the UNLOCK signal is created by IC37 in order to turn ON the gate of Q48 (Q49 is turned OFF) so that subcarrier from the IC35 is used to input this signal into the demodulation circuit.

Depending on signal level, the subcarrier which is converted into sign waves is controlled by VCA reduces the level of SUB signals at the time of ANT input which is less than about 40 dB $\mu$  for the purpose of auto-quieting action.



# L-1000T

## CIRCUIT DESCRIPTION

### 2. Test mode

#### 1. Memory clear (initialization)

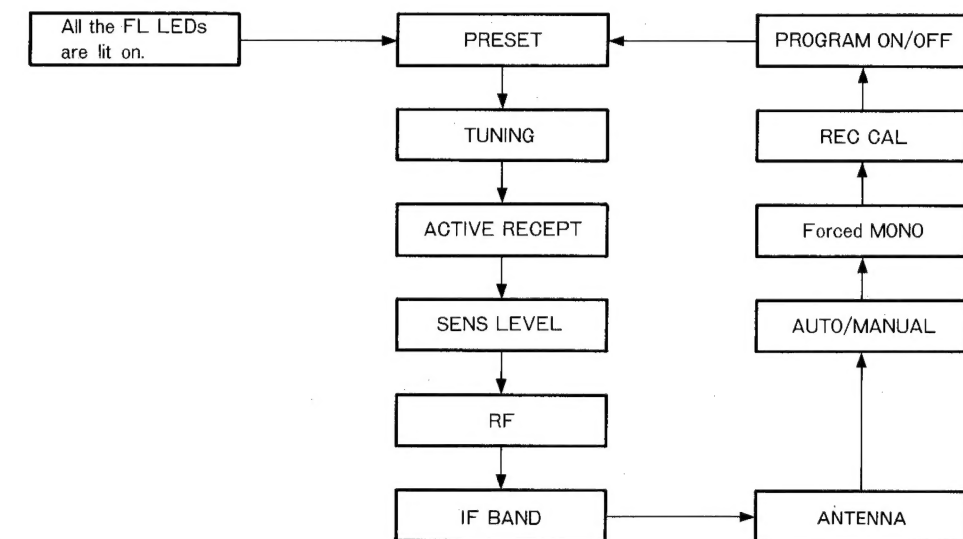
Method: AC plug into an outlet by pressing the POWER key.

Content: First, initialize the preset and program contents, then, enter the normal operation after turning ON the power.

#### 2. Test mode

Method: AC plug into an outlet by pressing the MODE key.

Content: First, initialize the preset and program contents. All the FL LEDs are then lit ON to be waiting for input of the MODE key. Every pressing the MODE key results in the variations shown below. In a condition, variations occur within its condition to meet a pulse of the rotary encoder.



For releasing the test mode, press the POWER key, then, enter the normal operation.

Note: Select an IF band in the order of WIDE, NORMAL and NARROW for clockwise turning, while in the order of WIDE, NARROW and NORMAL for counterclockwise turning.

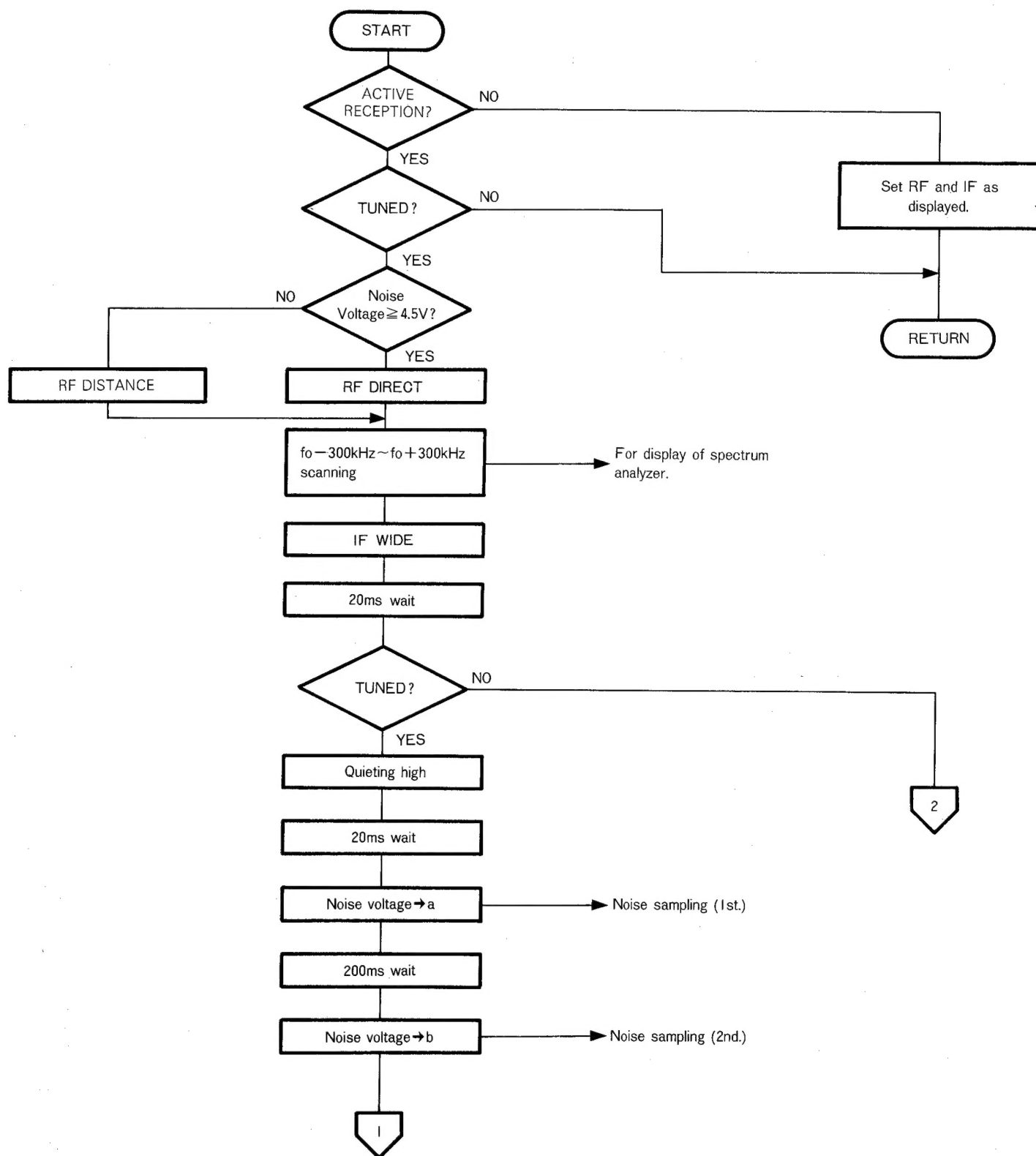
### Conditions by model for destination

Destination	J	K	X, T, E, L
Receiving frequency range	76.0~90.0 MHz	87.5~108.0 MHz	87.5~108.0 MHz
Channel space	100 kHz	100 kHz	(AUTO) 50 kHz (MANUAL) { 25 kHz 50 kHz
PLL reference frequency	25 kHz	25 kHz	25 kHz
LOSC frequency	f-10.7 MHz	f+10.7 MHz	f+10.7 MHz
PLL input terminal	FMIN (11 pin)	FMIN (11 pin)	FMIN (11 pin)
PLL IC reference voltage	5 V	5 V	5 V
Band select D40	○	×	×
Band select D41	×	○	×

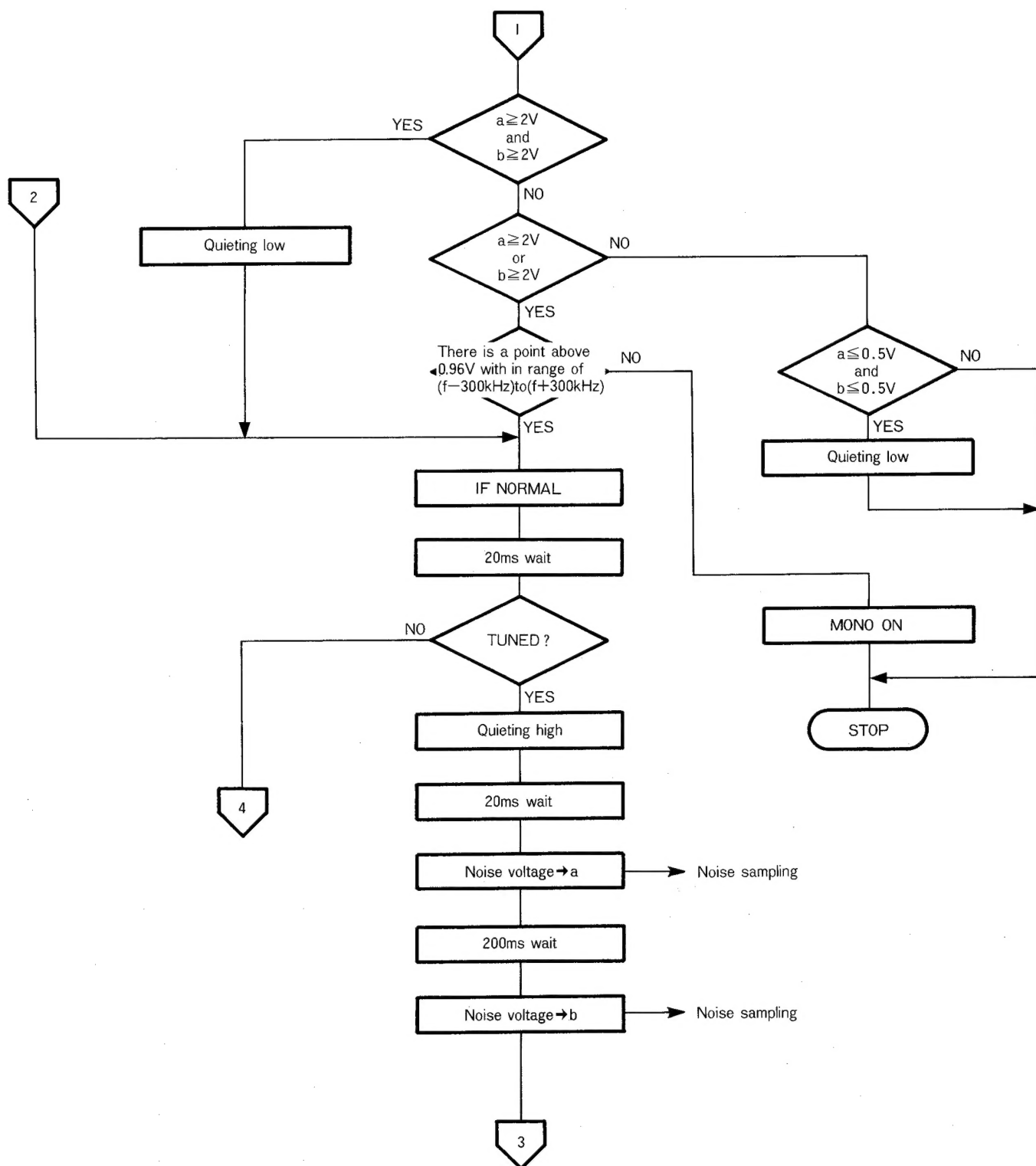


## CIRCUIT DESCRIPTION

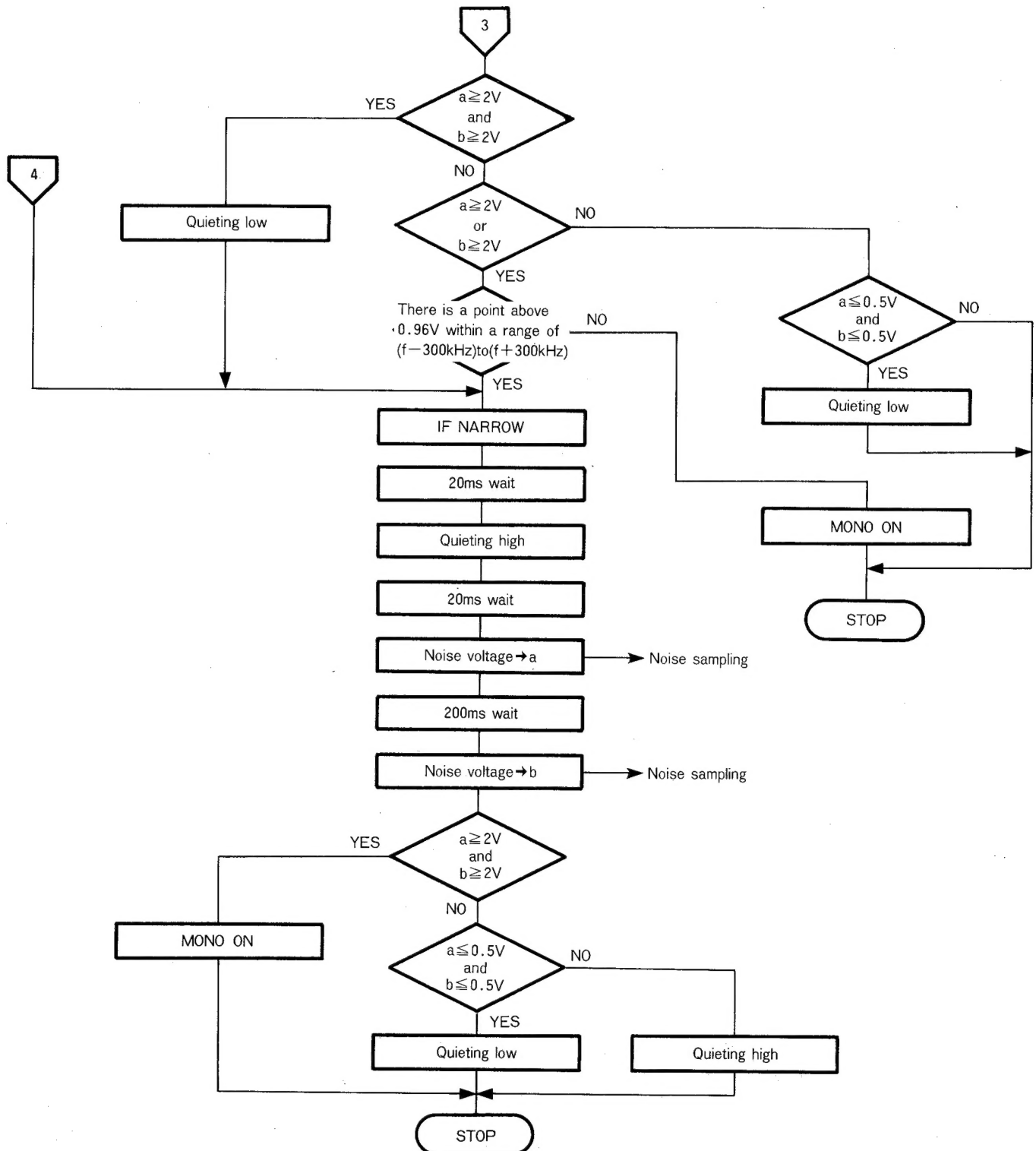
### 3. Flow chart for active reception operation



## CIRCUIT DESCRIPTION



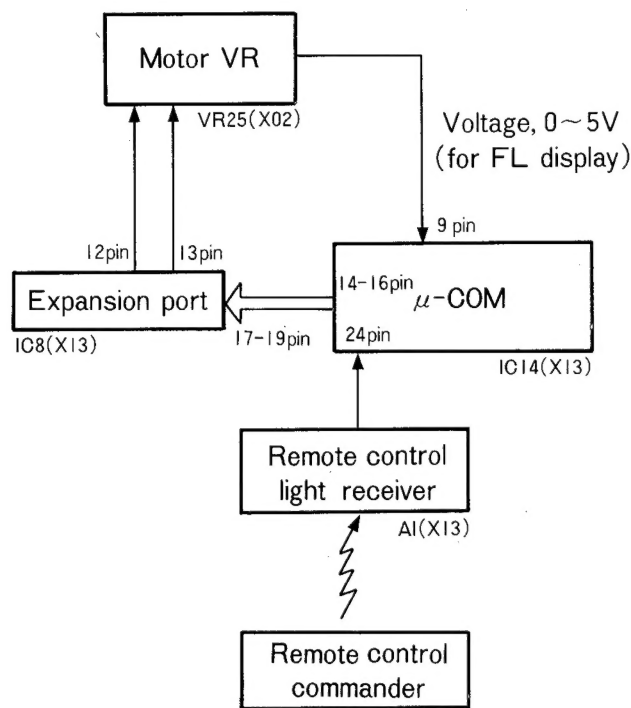
## CIRCUIT DESCRIPTION



# L-1000T

## CIRCUIT DESCRIPTION

### 4. Output level variable

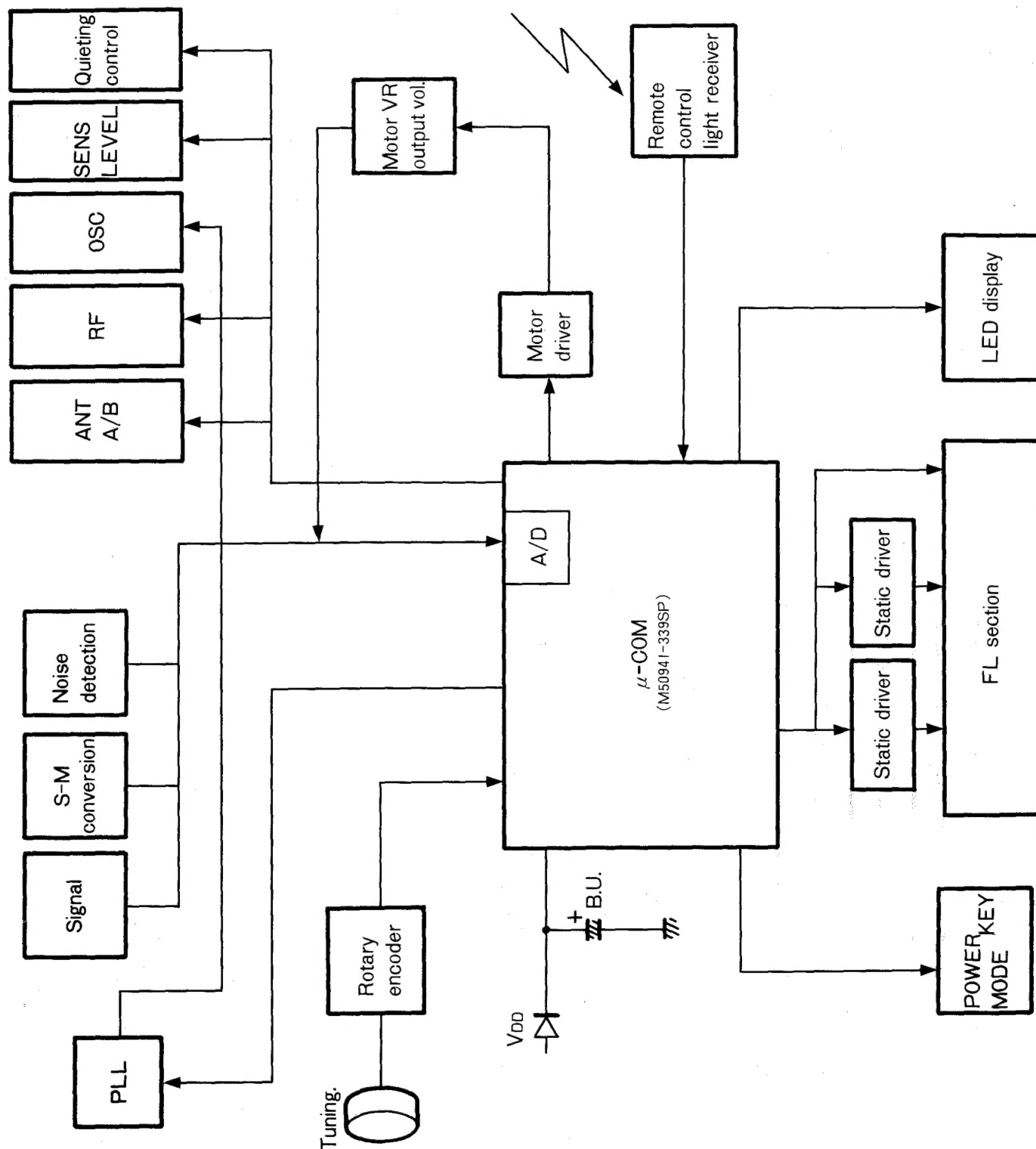


IC8 (X13)	I/O port Pin 12	I/O port Pin 13
OUT LEVEL UP	H	L
OUT LEVEL DOWN	L	H
FIX	L	L

## CIRCUIT DESCRIPTION

### 5. IC14: M50941-339SP (X13-6452-70) Microprocessor IC

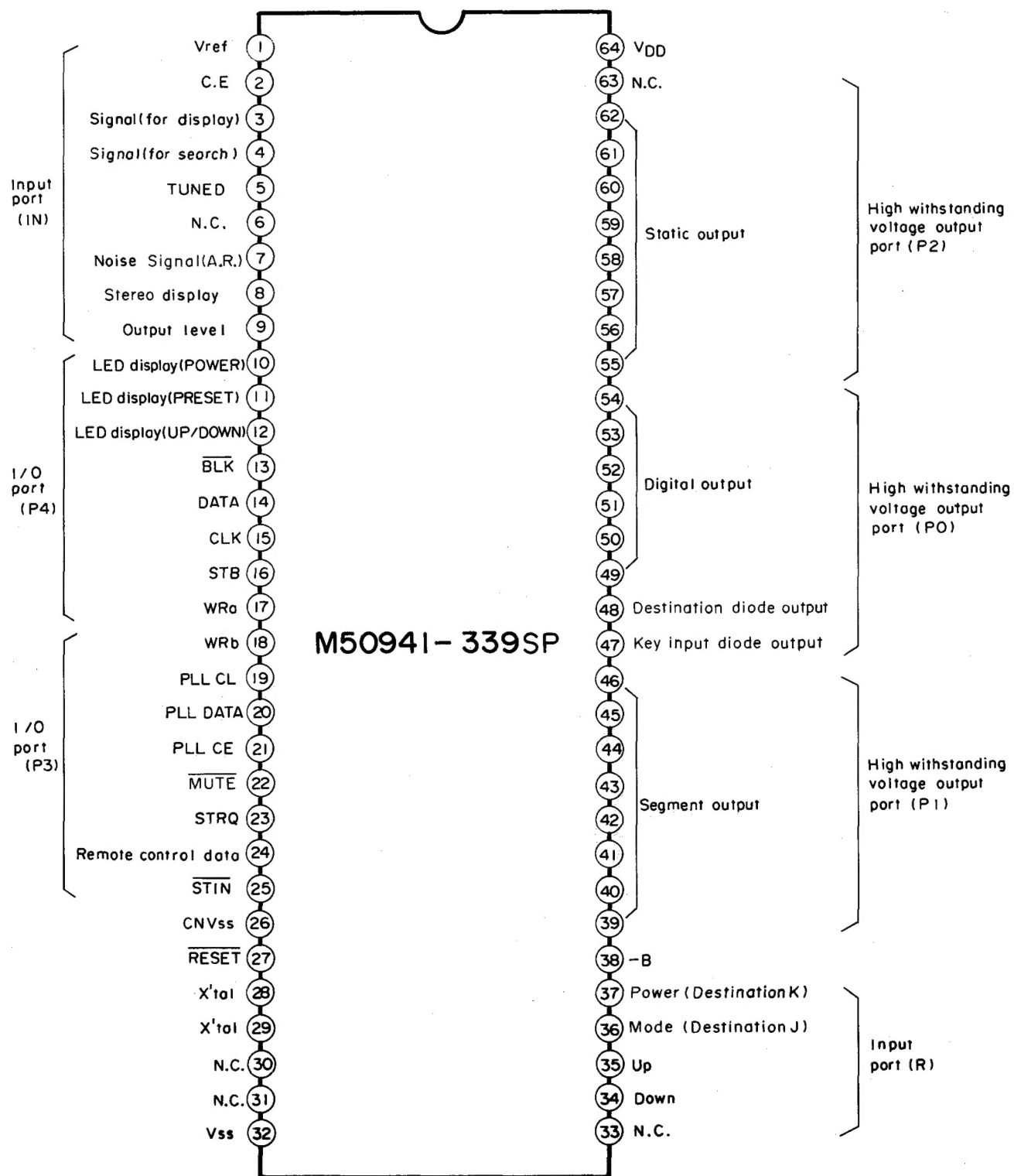
#### Microcomputer Peripheral Block Diagram



# L-1000T

## CIRCUIT DESCRIPTION

Terminal Connection Diagram



## CIRCUIT DESCRIPTION

## Descriptions of terminals

Pin No.	I/O	Designation	Operational specification
1	I	Vref	A/D's reference voltage input terminal, +5.0V
2	I	C.E.	AC ON = H; AC OFF = L
3	I	SIGNAL DISPLAY	A/D port to display 0 to 100 dB in the FL at an analog input of 0 to 5V.
4	I	SIGNAL SEARCH	A/D port for stop, whose time constant is faster than pin No.3 at an analog input of 0 to 5V.
5	I	TUNED (S-M-conversion)	TUNED = H
6		N.C.	N.C.
7	I	Noise signal (for ACTIVE RECEPTION)	A/D port for analog input of 0 to 5V (0-1.5V = WIDE; 1.5V-2.5V = NORMAL; 2.5V-5V = NARROW)
8	I	ST display	STEREO = L (since this is erroneously lit ON right after switching ON the power supply, however, the display takes AND with TUNED.
9	I	Output level information	A/D port, 0 to 5V (to be output at VR of the B curve.)
10	O	LED (POWER)	Turning ON the POWER SW outputs H.
11	O	LED (PRESET)	Selecting the PRESET by the rotary encoder outputs H.
12	O	LED (UP/DOWN)	Selecting the UP/DOWN by the rotary encoder outputs H.
13	O	BLK	For the FL driver. Lighting ON = H.
14	O	DATA	For the FL driver. For the expansion port.
15	O	CLK	For the FL driver. For the expansion port.
16	O	STB	For the expansion port.
17	O	WRa	For the FL driver.
18	O	WRb	For the FL driver.
19	O	PLL CL	CLOCK output port for PLL.
20	O	PLL Data	Data output port for PLL.
21	O	PLL CE	CE output port for PLL.
22	O	MUTE	MUTE output terminal. L = MUTE.
23	O	STRQ	STRQ output port for PLL.
24	I	Remote control unit	Remote control data input port.
25	I	STIN	STIN input port for PLL.
26	I	CNVss	Connection to Vss.
27	I	RESET	RESET terminal.
28	I	Xin	Clock (4.19 MHz) input.
29	O	Xout	Clock (4.19 MHz) output.
30	I	Xcin	Connection to Vss.
31	O	Xcout	N.C.
32	I	Vss	Vss



# L-1000T

## CIRCUIT DESCRIPTION

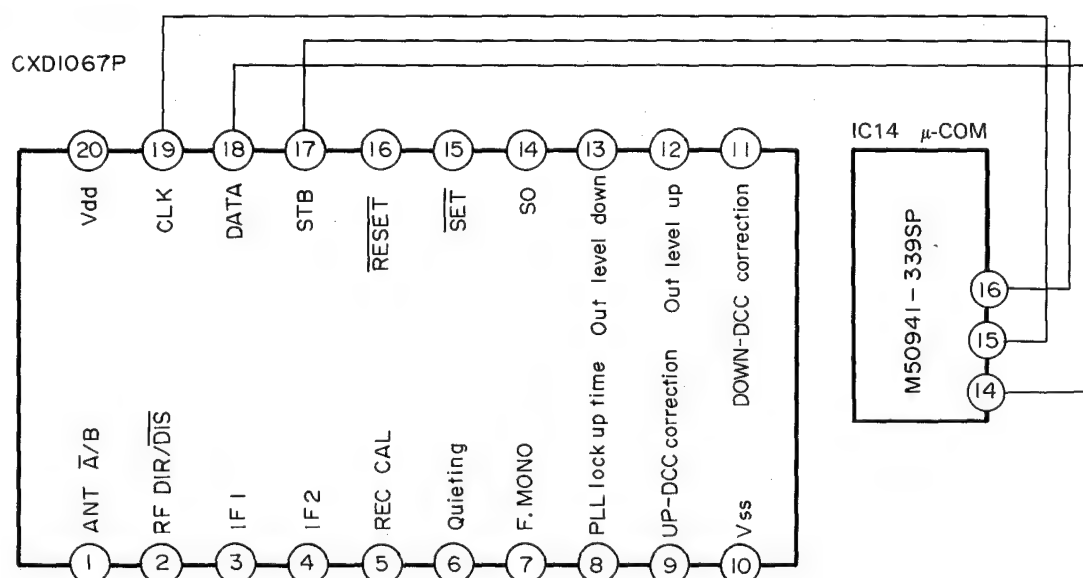
Pin No.	I/O	Designation	Operational specification
33		$\phi$	N.C.
34	I	Key input	Rotary encoder input. (DOWN)
35	I	Key input	Rotary encoder input. (UP)
36	I	Key input	47 pin: At H, MODE key input; 48 pin: At H, j-destination.
37	I	Key input	47 pin: At H, POWER key input; 48 pin: At H, K-destination.
38	I	Vp	—B input terminal.
39	O	P17	Segment output from the dynamic section (for S-meter, 1G-6G.)(P7)
40	O	P16	Segment output from the dynamic section (for S-meter, 1G-6G.)(P6)
41	O	P15	Segment output from the dynamic section (for S-meter, 1G-6G.)(P5)
42	O	P14	Segment output from the dynamic section (for S-meter, 1G-6G.)(P4)
43	O	P13	Segment output from the dynamic section (for S-meter, 1G-6G.)(P3)
44	O	P12	Segment output from the dynamic section (for S-meter, 1G-6G.)(P2)
45	O	P11	Segment output from the dynamic section (for S-meter, 1G-6G.)(P1)
46	O	P10	Segment output from the dynamic section (for S-meter, 1G-6G.)(P0)
47	O	P07	Diode output for key input.
48	O	P06	Destination diode output.
49	O	P05	Digital output from the dynamic section. (1G)
50	O	P04	Digital output from the dynamic section. (2G)
51	O	P03	Digital output from the dynamic section. (3G)
52	O	P02	Digital output from the dynamic section. (4G)
53	O	P01	Digital output from the dynamic section. (5G)
54	O	P00	Digital output from the dynamic section. (6G)
55	O	P27	N.C.
56	O	P26	Static output. (Q0)
57	O	P25	Static output. (Q1)
58	O	P24	Static output. (Q2)
59	O	P23	Static output. (Q3)
60	O	P22	Static output. (Q4)
61	O	P21	Static output. (Q5)
62	O	P20	Static output. (Q6)
63	O	AVcc	Connection to Vdd.
64	I	Vdd	Vdd.

## CIRCUIT DESCRIPTION

### 6. IC8: CXD1067P (X13-6452-70)

#### Expansion I/O Ports

#### Terminal Connection Diagram



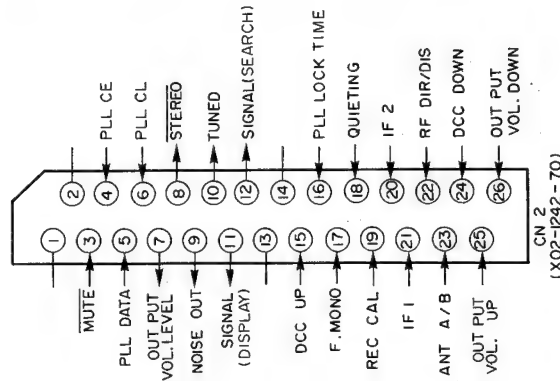
#### Descriptions of terminals

Pin No.	I/O	Designation	Operational specification
1	O	P1	ANT A/B output; L = ANT A H = ANT B
2	O	P2	RF DIR/DIS output; L = DISTANCE H = DIRECT
3	O	P3	IF1 output.
4	O	P4	IF2 output.
5	O	P5	REC CAL output; H = REC CAL.
6	O	P6	Quieting output (high noise = Hi; low noise = Low.)
7	O	P7	Forced mono output. H = Forced mono.
8	O	P8	PLL LOCK UP TIME selection output. H = Fast (during search.)
9	O	P9	UP-DCC correction. H = +25kHz correction.
10	I	GND	GND.
11	O	P10	DOWN-DCC correction. H = -25kHz correction.
12	O	P11	OUT LEVEL UP. H = LEVEL UP
13	O	P12	OUT LEVEL DOWN H = LEVEL DOWN } At no motion L, L
14		SO	N.C.
15	I	SET	PULL UP at Vdd.
16	I	RESET	Reset terminal. Reset at power ON.
17	I	STB	STB terminal.
18	I	Data	Data terminal.
19	I	CLK	CLK terminal.
20	I	Vdd	Vdd terminal.

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## CIRCUIT DESCRIPTION

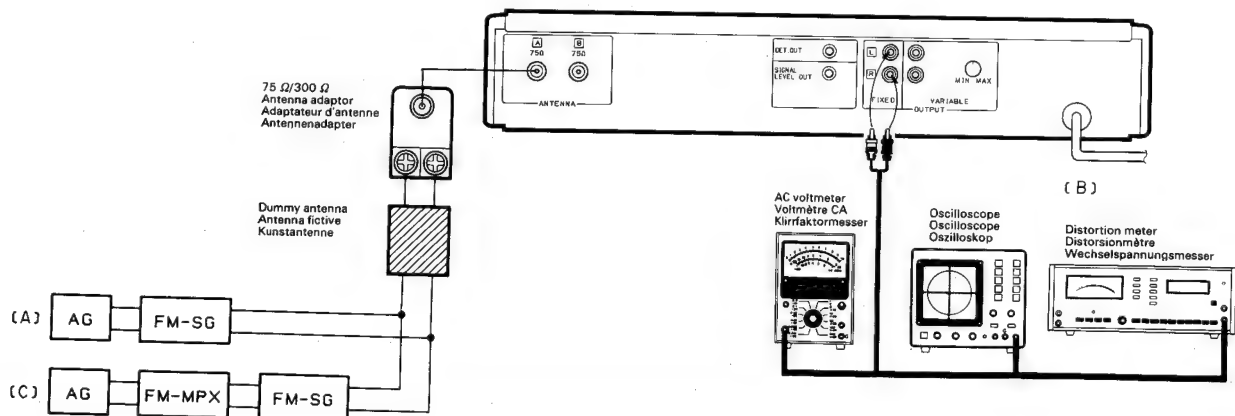
### 7. Descriptions of Terminal Functions of CN2 (X02-1242-70)



Pin No.	I/O	Designation	Operational specification												
1			N.C.												
2			N.C.												
3	I	MUTE	LOW level at MUTE (microcomputer output.)												
4	I	PLL CE	To PLL synthetic IC (microcomputer output.)												
5	I	PLL DATA	To PLL synthetic IC (microcomputer output.)												
6	I	PLL CL	To PLL synthetic IC (microcomputer output.)												
7	O	OUTPUT VOL.LEVEL	To output a DC voltage of 0 to 5V, depending upon the position of variable output motor VR (to the microcomputer's A/D port.)												
8	O	STEREO	LOW at STEREO (to the microcomputer.)												
9	O	NOISE OUT	Noise output of a DC voltage of 0 to 5V, depending upon a size of interference signal (to the micro-computer's A/D port.)												
10	O	TUNED	TUNED = H (to the microcomputer.)												
11	O	SIGNAL (DISPLAY)	A DC voltage for displaying a signal level (center display) to output a DC voltage of 0 to 5V into the microcomputer's A/D port by an antenna input.												
12	O	SIGNAL (SEARCH)	A DC voltage for displaying spectrum analyser (both-side display, i.e. a port to read out a signal level when TUNED becomes HIGH during tuning, by the microcomputer (to the microcomputer's A/D port.).												
13			N.C.												
14			N.C.												
15	I	DCC UP	A signal for correcting strain at the + 25kHz offset = H (microcomputer's out-put.)												
16	I	PLL LOCK TIME	A signal for selecting a time constant during tuning = H (microcomputer's out-put.)												
17	I	F.MONO	Forced mono = H (microcomputer output.)												
18	I	QUIETING	A quieting control signal and a signal for selecting a noise signal time constant at an active reception operation. (microcomputer output.)												
19	I	REC CAL	REC CAL = H (microcomputer output.)												
20	I	IF2	<table><tr><td></td><td>IF1</td><td>IF2</td></tr><tr><td>WIDE</td><td>L</td><td>L</td></tr><tr><td>NORMAL</td><td>H</td><td>L</td></tr><tr><td>NARROW</td><td>H</td><td>H</td></tr></table> (Microcomputer's output.)		IF1	IF2	WIDE	L	L	NORMAL	H	L	NARROW	H	H
	IF1	IF2													
WIDE	L	L													
NORMAL	H	L													
NARROW	H	H													
21	I	IF1													
22	I	RF DIR/DIS	RF selection (microcomputer's output.)												
23	I	ANT A/B	ANT A/B selection (microcomputer's output.)												
24	I	DCC DOWN	- 25kHz offset = H (microcomputer's output.)												
25	I	OUTPUT VOL. UP	Motor VR UP = H (microcomputer's output.)												
26	I	OUTPUT VOL. DOWN	Motor VR DOWN = L (microcomputer's output.)												

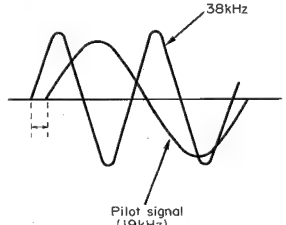
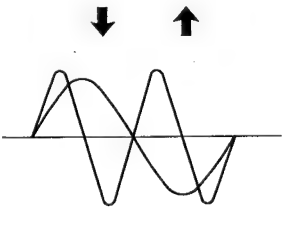
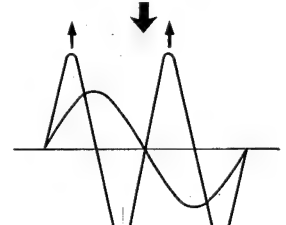
## ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG
<b>FM SECTION</b> Unless otherwise specified, the individual switches should be set as following: SELECTOR: FM TUNING MODE: AUTO IF BAND: WIDE							
1	V <sub>T</sub> adjustment	—	Connect a DC voltmeter between TP15 (V <sub>T</sub> ) and TP14 (GND) (X02).	87.5MHz	L6 (X01)	3.0V ± 50mV	(a)
2	V <sub>T</sub> adjustment	—	Connect a DC voltmeter between TP15 (V <sub>T</sub> ) and TP14 (GND) (X02).	108.0MHz	TC6 (X01)	25.0V ± 0.1V	(a)
Repeat the adjustments 1 and 2 above for several times to limit the adjusting error within a specified range.							
3	Tracking	(A) 90.5MHz 1kHz mod. 75kHz dev. 10dB <sub>μ</sub> (ANT input)	(B)	90.5MHz	L1, 2, 3, 4, 5 (X01)	Maximize and optimize the output.	
4	Tracking	(A) 106.5MHz 1kHz mod. 75kHz dev. 10dB <sub>μ</sub> (ANT input)	(B)	106.5MHz	TC1, 2, 3, 4, 5 (X01)	Maximize and optimize the output.	
Repeat the adjustments 3 and 4 above for several times to maximize and optimize the output.							
5	IFT adjustment	(A) 106.5MHz 1kHz mod. 75kHz dev. 10dB <sub>μ</sub> (ANT input)	(B)	106.5MHz	L9, 10, 12 (X01)	Maximize and optimize the output.	
6	PLL DET center voltage	(A) 98MHz Dev. OFF 80dB <sub>μ</sub> (ANT input)	Connect a DC voltmeter between TP7 and GND. (X02)	98MHz DISTANCE ON WIDE ON A.R. OFF	L7 (X02)	Turn the core to adjust the voltage to 0.	(b)
7	Signal voltage	(A) 98MHz 1kHz mod. 40kHz dev. (E-, X-, T-, L-type) 1kHz mod. 75kHz dev. (K-type) 10~70dB <sub>μ</sub> (ANT input)	Do this adjustment by watching the signal level.	98MHz DISTANCE ON WIDE ON NARROW ON	VR18 (offset) VR17 (gain) (X02)	① Turn VR18 so that the 1st. point is then lit ON at an ANT input of 10dB <sub>μ</sub> . ② Turn VR17 so that the 7th. point is then lit ON at an ANT input of 70dB <sub>μ</sub> . Alternatively repeat the adjustments ① and ② above.	
8	MPX VCO	(C) 98MHz Pilot/6kHz dev. 80dB <sub>μ</sub> (ANT input)	Connect a frequency counter (high imp.) between TP11 and TP10 to short between TP9 and TP10.	98MHz	VR24 (X02)	Adjust VR24 so as to become 19kHz.	(c)
9	Pilot PHASE	(C) 98MHz Pilot/6kHz dev. 80dB <sub>μ</sub> (ANT input)	Connect an oscilloscope between TP6 and TP11 and check the resurge form.	98MHz	L25 (X02)	Adjust the output pilot signal's phase of IC35 to the input signal.	(d)
10	Pilot cancel	(C) 98MHz Pilot/6kHz dev. 80dB <sub>μ</sub> (ANT input)	Connect an AC voltmeter between TP4 and GND.	98MHz	VR23 L27 (X02)	Adjust VR23 and L27 so as to be minimum level.	(e)



# L-1000T

## ADJUSTMENT

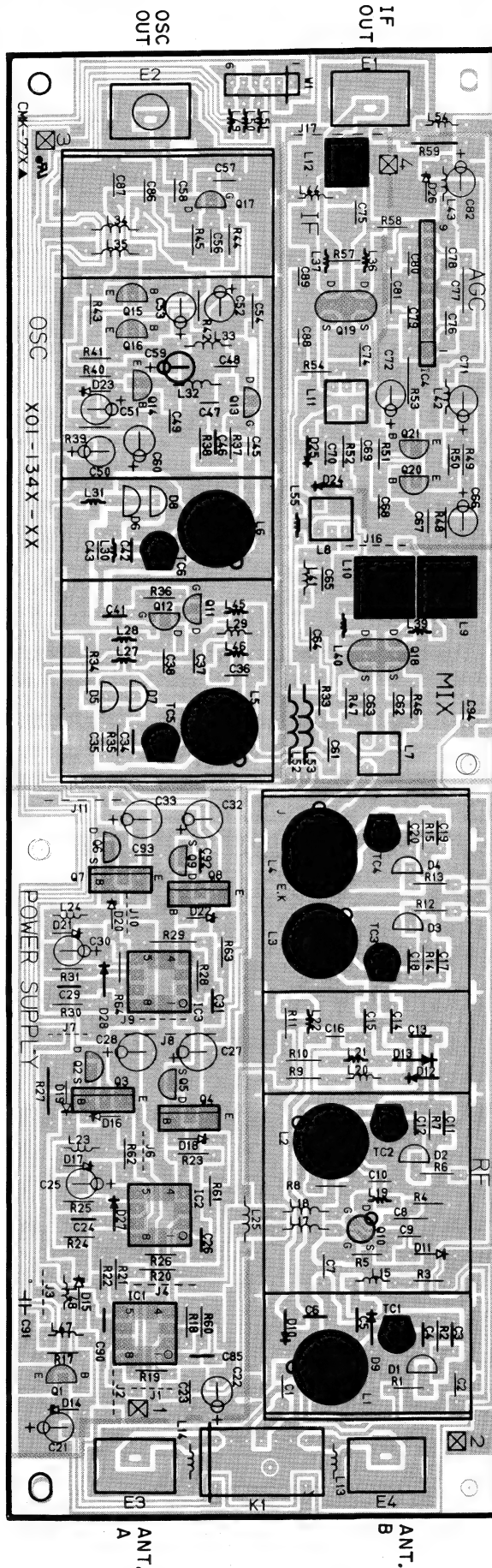
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG
11	Subcarrier phase level	(C) 98MHz Pilot/6kHz dev. 80dB $\mu$ (ANT input)	Connect an oscilloscope between TP6 (PILOT) and TP3 (38kHz) (dual trace oscilloscope.)	98MHz	L26 (phase) L28 (level) (X02)	<p>To match the 38kHz phase with the input pilot signal.</p>  <p>Runout between phases</p>  <p>Upon finding a phase,</p>  <p>Maximize the 38kHz level. Repeat alignment L26 and L28 several times.</p>	(f)
12	Distortion MONO	(C) 98MHz 1kHz mod. 40kHz dev. (E-, X-, T-, L-type) 1kHz mod. 7.5kHz dev. (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz DISTANCE ON WIDE ON A.R. OFF	VR7 (DLLD) VR8 (3rd.) VR11 (2nd.) VR16 (4th.) (X02)	Alternatively turn each VR to minimize the distortion.	
13	Distortion SUB	(C) 98MHz 1kHz mod. 40kHz dev. Pilot/6kHz dev. (E-, X-, T-, L-type) 1kHz mod. 7.5kHz dev. Pilot/7.5kHz dev. (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz DISTANCE ON WIDE ON A.R. OFF	VR10 (3rd.) (X02)	Minimize the distortion.	
14	Distortion L or R	(C) 98MHz 1kHz mod. 40kHz dev. Pilot/6kHz dev. (E-, X-, T-, L-type) 1kHz mod. 7.5kHz dev. Pilot/7.5kHz dev. (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz DISTANCE ON WIDE ON A.R. OFF	VR14 (2nd.) VR15 (4th.) (X02)	Minimize the distortion.	

## ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG
15	Distortion MONO	(C) 98MHz 1kHz mod. 40kHz dev. (E-, X-, T-, L-type) 1kHz mod. 75kHz dev. (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz <b>NORMAL</b> ON	VR2 (3rd.) VR12 (2nd.) (X02)	Minimize the distortion.	
16	Distortion SUB	(C) 98MHz 1kHz mod. 40kHz dev. Pilot/6kHz dev. (E-, X-, T-, L-type) 1kHz mod. 75kHz dev. Pilot/7.5kHz dev. (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz <b>NORMAL</b> ON	VR9 (3rd.) (X02)	Minimize the distortion.	
17	Distortion L or R	(C) 98MHz 1kHz mod. 40kHz dev. Pilot/6kHz dev. (E-, X-, T-, L-type) 1kHz mod. 75kHz dev. Pilot/7.5kHz dev. (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz <b>NORMAL</b> ON	VR13 (2nd.) (X02)	Minimize the distortion.	
18	Distortion SUB	(C) 98MHz 1kHz mod. 40kHz dev. Pilot/6kHz dev. (E-, X-, T-, L-type) 1kHz mod. 75kHz dev. Pilot/7.5kHz dev. (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz <b>NARROW</b> ON	VR4 (X02)	Minimize the distortion.	
19	Distortion + offset (E,X,T,L type only)	(C) 98MHz 1kHz mod. 40kHz dev. 80dB $\mu$ (ANT input)	(B)	98MHz <b>WIDE</b> ON	VR6 (X02)	Minimize the distortion.	
20	Distortion - offset (E,X,T,L type only)	(C) 98MHz 1kHz mod. 40kHz dev. 80dB $\mu$ (ANT input)	(B)	98MHz <b>WIDE</b> ON	VR5 (X02)	Minimize the distortion.	
21	Separation WIDE	(C) 98MHz 1kHz mod. 40kHz dev. Pilot/6kHz dev. (L or R only) (E-, X-, T-, L-type) 1kHz mod. 67.5kHz dev. Pilot/7.5kHz dev. (L or R only) (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz <b>DISTANCE</b> ON <b>WIDE</b> ON <b>A.R.</b> OFF	VR 19 (L ch) VR20 (R ch) (X02)	Optimize the separation.	
22	Separation NORMAL	(C) 98MHz 1kHz mod. 40kHz dev. Pilot/6kHz dev. (L or R only) (E-, X-, T-, L-type) 1kHz mod. 67.5kHz dev. Pilot/7.5kHz dev. (L or R only) (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz <b>NORMAL</b> ON	VR 21 (X02)	Optimize the separation.	
23	Separation NARROW	(C) 98MHz 1kHz mod. 40kHz dev. Pilot/6kHz dev. (L or R only) (E-, X-, T-, L-type) 1kHz mod. 67.5kHz dev. Pilot/7.5kHz dev. (L or R only) (K-type) 80dB $\mu$ (ANT input)	(B)	98MHz <b>NARROW</b> ON	VR 22 (X02)	Optimize the separation.	

Note: Note that turning VR21 after adjusting VR22 changes the NARROW separation.

# PC BOARD (A/3)



FRONT END UNIT  
(X01-134X-XX)

Ref. No.	Q	Address
1	6B	
2	5B	
3	5B	
4	5C	
5	5C	
6	4B	
7	4B	
8	4C	
9	4C	
10	6C	
11	3C	
12	3B	
13	2C	
14	2B	
15	2B	
16	2B	
17	2C	
18	3C	
19	2C	
20	3C	
21	3C	
1	6B	
2	6B	
3	5B	
4	2C	

FRONT END UNIT  
(X01-134X-XX)

1	-6.9V
2,3	0V
4	-10.2V
5	10.2V (DISTANCE)
6	5.1V
7	9.4V
8	10.2V

Q10	G1 0V
	G2 -5.1V
	D 10.2V
	S -5.2V

Q11	G 0V
	D 8.1V
	S 0V

Q12	G -7.7V
	D -8.1V
	S 0V

Q13	G 0V
	D 7.4V
	S 0.7V

Q14	E -2.9V
	C -0.7V
	B -2.2V

Q15	E -7.4V
	C -8.1V
	B -8.0V

Q16	E 7.4V
	C 8.1V
	B 8.0V

Q17	G -8.0V
	D 2.1V
	S -8.0V

Q18	G 1 0V
	D 2 0V
	D 1 10.2V
	S 2 10.2V
	S 1 2.6V
	S 2 2.6V

Q19	G 1 0V
	D 2 0V
	D 1 10.2V
	S 2 10.2V
	S 1 2.0V
	S 2 2.0V

Q20	E 4.9V
	C 0.8V
	B 4.2V

Q21	E 4.9V
	C 0V
	B 8.3V

1	2.6V
2,3	0V
4	-10.2V
5,6	5.1V
7	2.0V
8	10.2V

1	4.6V
2,3	0V
4	-8.1V
5,6	5.1V
7	0.2V
8	8.1V

1	2.8V
2	4.7V
3	8.3V
4	2.0V
5	-
6	5.1V
7	-
8	4.6V
9	8.3V

E	14.7V
C	-14.8V
B	14.0V

G	10.9V
D	14.7V
S	10.9V

E	10.2V
C	14.7V
B	10.9V

E	-10.2V
C	-14.8V
B	-10.9V

G	-14.8V
D	-10.9V
S	-14.8V

G	8.8V
D	14.7V
S	8.8V

E	8.1V
C	14.7V
B	8.8V

E	-8.1V
C	-14.8V
B	-8.8V

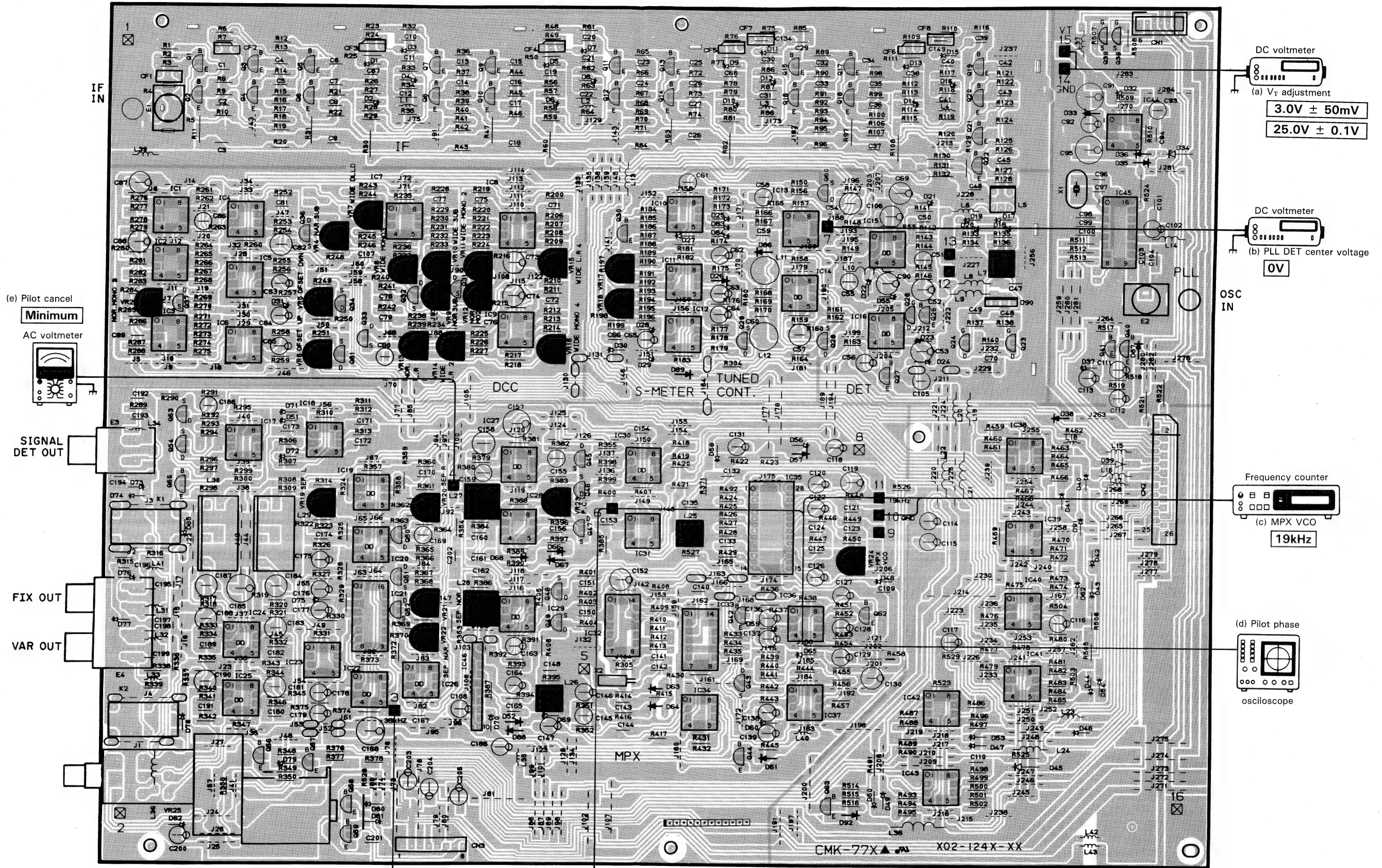
G	-14.8V
D	-8.8V
S	-14.8V

Refer to the schematic diagram for the values of resistors and capacitors.



# PC BOARD (B/3)

IF UNIT (X02-124X-XX)



(e) Pilot cancel  
Minimum  
AC voltmeter

DC voltmeter  
(a)  $V_T$  adjustment  
 $3.0V \pm 50mV$   
 $25.0V \pm 0.1V$

DC voltmeter  
(b) PLL DET center voltage  
0V

Frequency counter  
(c) MPX VCO  
19kHz

(d) Pilot phase  
oscilloscope

(f) Subcarrier phase level  
Oscilloscope

Refer to the schematic diagram for the values of resistors and capacitors.

IF UNIT  
(X02-124X)

IC1-3	1,2	0V
	3	-12
	4-8	0V

IC4, 7-9, 19,	1-3	0V
	4	-14.3
	5-7	5.1
	8	7 12.2

IC5	1-3	0V
	4	-
	5,6	5.1
	7	12.2
	8	-

IC6	1-3	0V
	4	-
	5,6	0V
	7	-12.2
	8	-

IC10	1	0.3V
	2,3	0V
	4	-14.3
	5,6	-0.9
	7	-13.4
	8	-

IC11	1	0V
	2,3	-0.7
	4	-14.3
	5-7	0V
	8	14.8

IC12	1-3	-
	4	-14.3
	5	3.7V
	6	3.2V
	7	14.0
	8	14.8

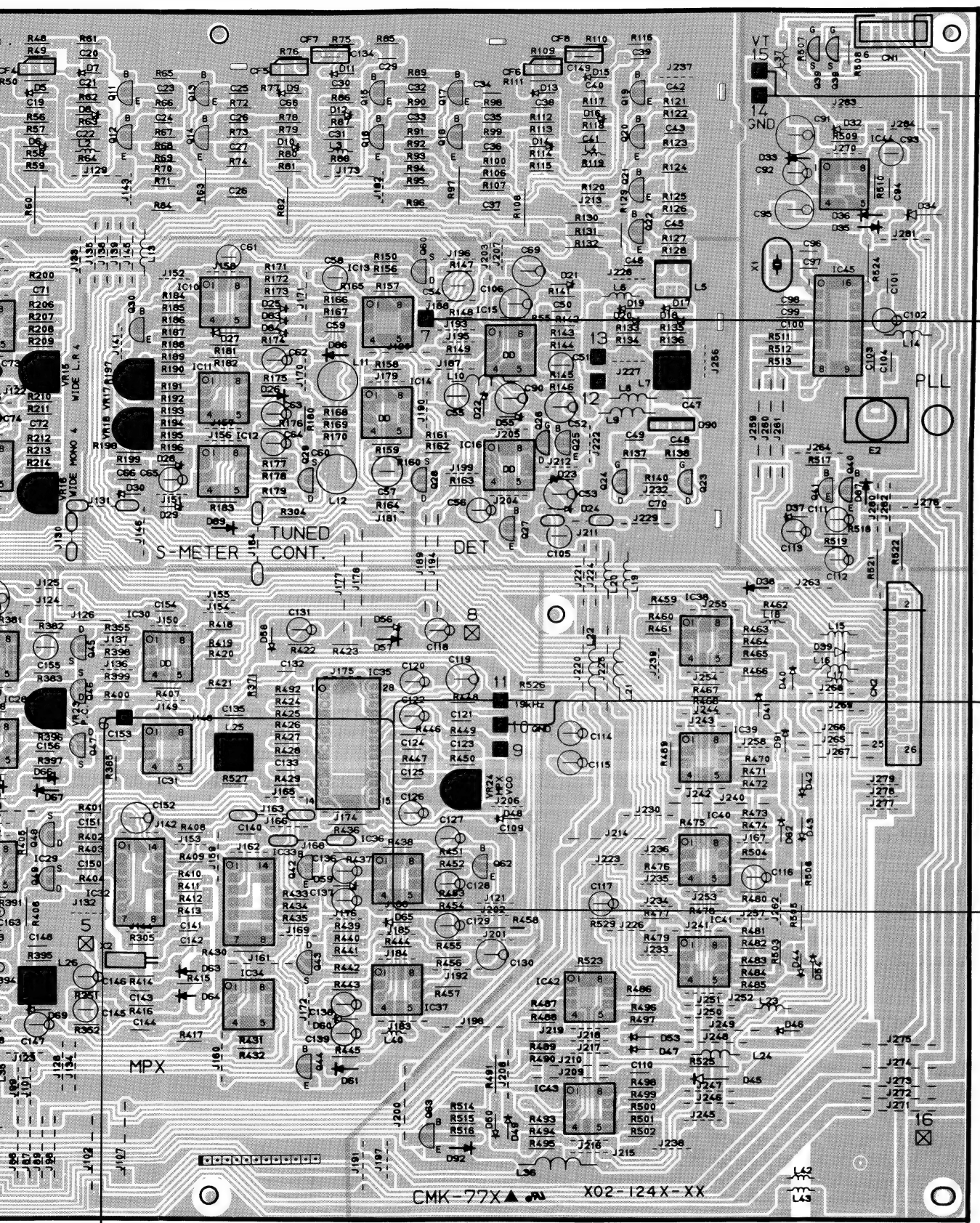
IC13-15	1-3	0V
	4	-
	5-7	0V
	8	-

IC16	1	-9.1V
	2,3	-9.7V
	4	-14.9
	5-7	9.1V
	8	-

IC17	1-3	0V
	4	-14.9
	5	0V
	6	-14.0
	7	14.0V
	8	-

IC18	1	5.8V
	2,3	0V
	4	-
	5	9.3V
	6	0V
	7	14.0V
	8	-





DC voltmeter  
(a)  $V_T$  adjustment  
 $3.0V \pm 50mV$   
 $25.0V \pm 0.1V$

DC voltmeter  
(b) PLL DET center voltage  
 $0V$

Frequency counter  
(c) MPX VCO  
 $19kHz$

(d) Pilot phase  
oscilloscope

(f) Subcarrier phase level  
Oscilloscope

Refer to the schematic diagram for the values of resistors and capacitors.

IF UNIT  
(X02-124X-XX)

IC1-3

1,2	0V
3	-12.2V
4-8	0V

IC4, 7-9, 19, 20

1-3	0V
4	-14.8V
5-7	0V
8	-

IC5

1-3	0V
4	-
5,6	5.1V
7	12.2V
8	-

IC6

1-3	0V
4	-
5,6	0V
7	-12.2V
8	-

IC10

1	0.3V
2,3	0V
4	-14.9V
5,6	-0.9V
7	-13.4V
8	-

IC11

1	0V
2,3	-0.7V
4	-14.9V
5-7	0V
8	14.8V

IC12

1-3	-
4	-14.9V
5	3.7V
6	3.2V
7	14.0V
8	14.8V

IC13-15

1-3	0V
4	-
5-7	0V
8	-

IC16

1	-9.1V
2,3	-9.7V
4	-14.9V
5-7	9.1V
8	-

IC17

1-3	0V
4	-14.9V
5	0V
6	-14.0V
7	14.0V
8	-

IC18

1	5.8V
2,3	0V
4	-
5	9.3V
6	0V
7	14.0V
8	-

IC19

1-3	0V
4	-14.8V
5	1.9V
6	1.8V
7	14.0V
8	-

IC21

1	3.3V
2	4.7V
3	-
4	-4.7V
5	12.5V
6	1.2V
7,8	0V
9	1.2V
10	0.8V
11,12	0V
13	0.9V
14	0V
15	12.3V
16	-

IC22

1	1.2V
2,3	0V
4	14.9V
5,6	0V
7	1.2V
8	-

IC23

1	12.3V
2,3	5.2V
4	-14.9V
5	0V
6	0.1V
7	-12.4V
8	-

IC24, 25, 27, 30

1-3	0V
4	-14.9V
5-7	0V
8	-

IC26

1	0.8V
2,3	0V
4	-14.9V
5,6	0V
7	0.9V
8	-

IC28

1-3	0V
4	-14.8V
5	-0.1V
6	0V
7	-14.0V
8	-

IC29

1-3	0V
4	-14.8V
5	1.9V
6	1.8V
7	14.0V
8	-

IC31

1-3	2.4V
4	-14.9V
5-7	0V
8	-

IC32

1-6	2.5V
7	-
8	2.5V
9	1.7V
10,11	-
12	2.4V
13	-
14	5.1V

IC33

1	3.2V
2	0V
3	2.6V
4	7.9V
5	8.5V
6-9	-
10	8.5V
11	0V
12	-
13	7.9V
14	5.1V

IC34

1	0.4V
2	8.3V
3	1.4V
4	-1.1V
5	0.2V
6	0.1V
7	0.2V
8	29.4V

IC35

1-9	-
10,11	2.8V
12	-
13	4.6V
14	MONO: 2.3V
15,16	2.4V
17	4.9V
18	0V
19,20	2.4V
21	1.4V
22-24	2.4V
25	8.0V
26	2.4V
27	-
28	2.4V

IC36

1	5.8V
2,3	5.1V
4	14.8V
5,6	5.1V
7	8.6V
8	-

IC37

1	14.0V
2	0V
3	9.1V
4	-14.8V
5	0V
6	13.0V
7	-13.0V
8	-

IC38-42

1	-
2	1.6V
3	-
4	-14.8V
5	-
6	1.6V
7	-
8	14.8V

IC43

1,2	-
3	1.6V
4	-14.9V
5	(VR UP) 5V
6	-
7	UP 13.0V DOWN -13.0V
8	14.8V

IC44

1-3	1.8V
4	-4.7V
5,6	1.8V
7	3.0V
8	29.4V

IC45

1	1.1V
2	1.8V
3-5	0V
6-10	-
11	2.5V
12,13	4.6V
14	-
15	1.8V
16	0V

IC46

1,2	0V
3	0.3V
4	0V
5	-14.8V
6-9	-
10	14.1V

Q1, 3

E	-0.7V
C	8.9V
B	-

Q2

E	-0.7V
C	8.4V
B	-

Q4

E	-0.7V
C	7.7V
B	-

Q5

E	-0.7V
C	6.3V
B	-

Q6

E	-0.7V
C	6.3V
B	-

Q7, 16

E	-0.7V
C	9.3V
B	-

Q8

E	-0.7V
C	8.0V
B	-

Q9

E	-0.7V
C	9.6V
B	-

Q10

E	-0.7V
C	6.7V
B	-

Q11

E	-0.7V
C	9.9V
B	-

Q12

E	-0.7V
C	8.2V
B	-

Q13

E	-0.7V
C	10.3V
B	-

Q14

E	-0.7V
C	7.3V
B	-

Q15

E	-0.7V
C	10.7V
B	-

Q17

E	-0.7V
C	11.3V
B	-

Q18

E	-0.7V
C	9.0V
B	-

Q19

E	-0.7
C	11.8V
B	-

Q20

E	-0.7V
C	10.4V
B	-

Q21

E	-0.4V
C	13.0V
B	-

Q22

E	-0.4V
C	12.5V
B	-

Q23

G	4.2V
D	9.1V
S	5.7V

Q24

G	4.2V
D	5.7V
S	9.1V

Q25

E	-
C	-9.7V
B	-

Q26

G	9.1V
D	-
S	9.1V

Q27

E	-9.7V
C	0.5V
B	-9.1V

Q28, 34, 35, 45, 46

G	-
D	0V
S	-

Q29

G	-
D	-
S	3.7V

Q30, 63

E	-
C	-
B	-

Q31-33, 36, 37, 43, 47-49, 51-53, 60

G	-
D	-
S	-

Q38

G	-
D	-
S	14.0V

Q39

G	-
D	-
S	10.7V

Q40

E	4.7V
C	9.9V
B	5.4V

Q41

E	0.6V
C	5.4V
B	1.2V

Q42

E	5.1V
C	9.5V
B	5.8V

Q44

E	-1.1V
C	-14.9V
B	-1.7V

Q50

G	14.0V
D	-
S	-

Q54

G	-
D	0V
S	0V

Q55

E	-14.9V
C	-14.8V
B	-14.1V

Q56

E	-
C	11.0V
B	11.9V

Q57

E	0V
C	0V
B	0.6V

Q58

E	0V
C	9.8V
B	-

Q59

E	0V
C	-10.8V
B	-

Q61

G	-
D	-
S	0V

Q62

E	8.0V
C	9.5V
B	8.6V

IF UNIT  
(X02-124X-XX)

Ref. No.	IC	Q	Address
1	1G		2G
2	2G		3G
3	1H		4
4	2H		4
5	1H		4
6	2H		4
7	1I		11
8	2I		11
9	1I		11
10	2I		11
11	1J		1J
12	2J		1J
13	1J		1J
14	2J		1J
15	1K		2K
16	2K		2K
17	1K		2K
18	2K		2K
19	1L		2L
20	2L		2L
21	2L		2L
22	2L		2L
23	3L		3L
24	3L		3L
25	3L		3L
26	3L		3L
27	3L		3L
28	3K		3K
29	3J		3J
30	3J		3J
31	3I		3I
32	3I		3I
33	3H		3H
34	3H		3H
35	5I		5I
36	3H		3H
37	3G		3G
38	1M		1M
39	1M		1M
40	3M		3M
41	3M		3M
42	5K		5K
43	5K		5K
44	6K		6K
45	4J		4J
46	4J		4J
47	4J		4J
48	5J		5J
49	5J		5J
50	4I		4I
51	5I		5I
52	5I		5I
53	4G		4G
54	4G		4G
55	4G		4G
56	6H		6H
57	6H		6H
58	6H		6H
59	6H		6H
60	2K		2K
61	3H		3H
62	5L		5L
63	6K		6K

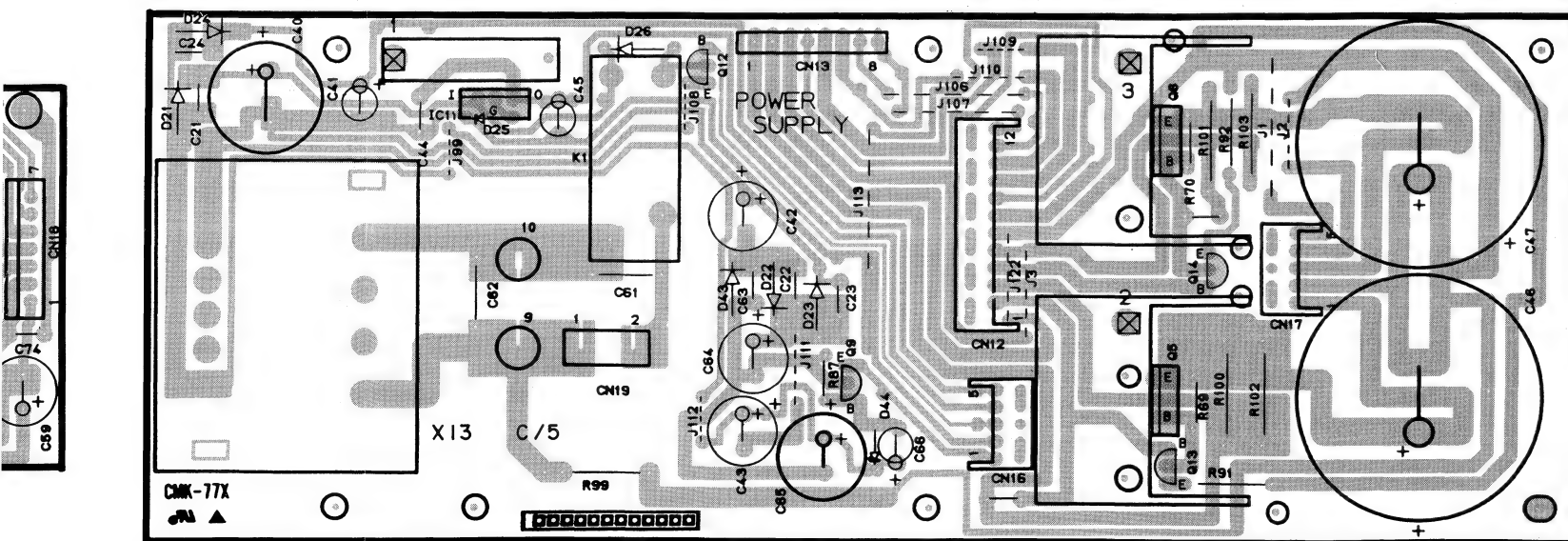
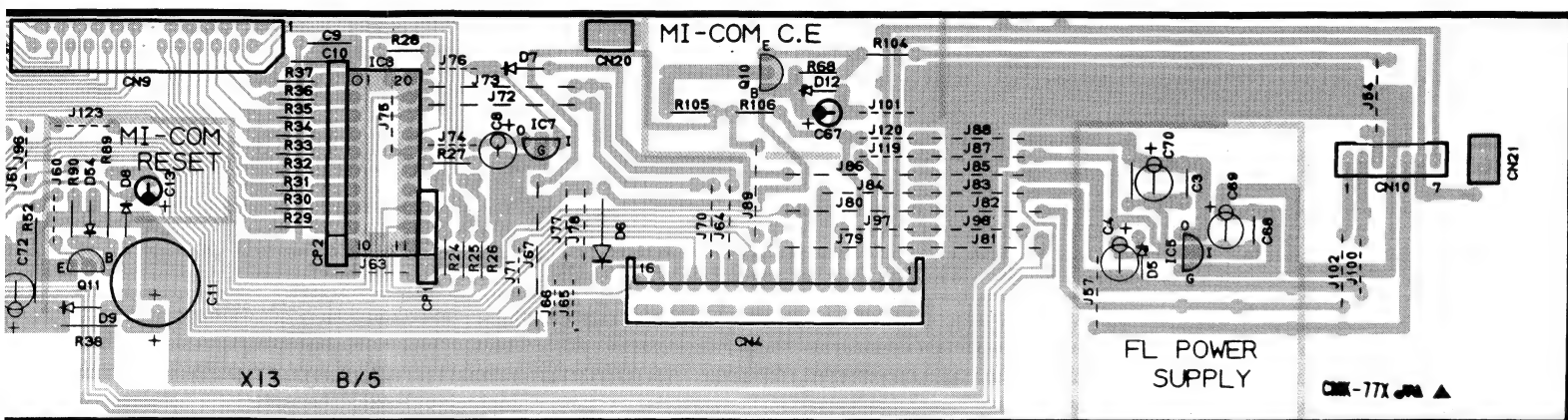
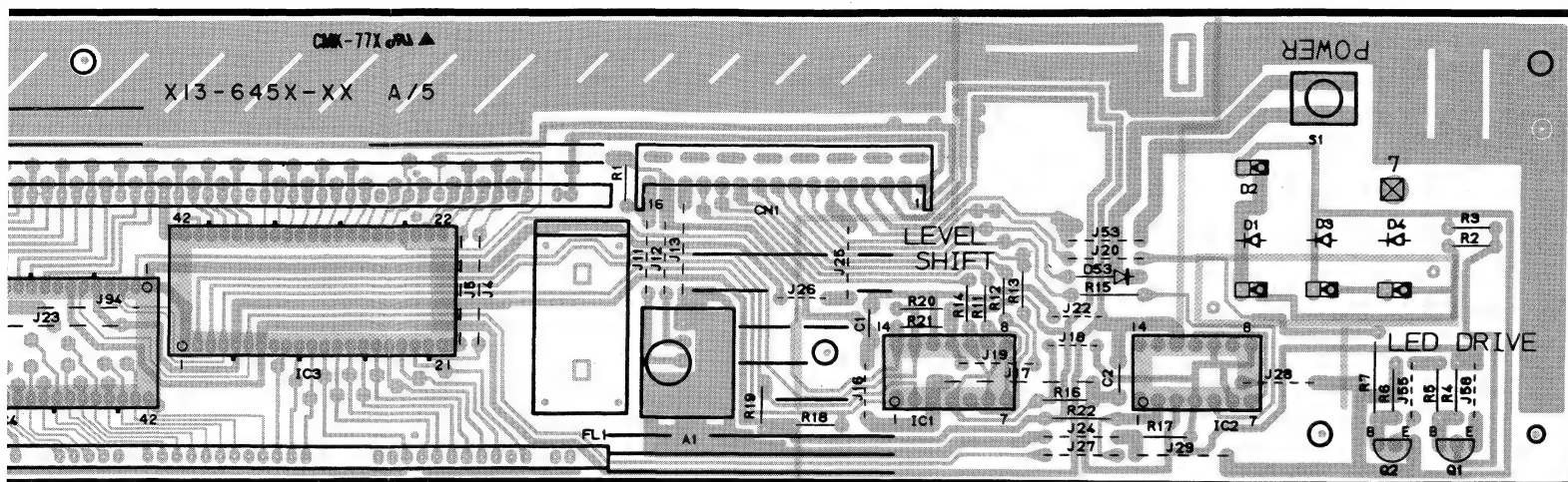


- 1
- 2
- 3
- 4
- 5
- 6
- 7



26





SUB-CIRCUIT UNIT  
(X13-645X-XX)

Ref. No.	Q	Address
1	3AB	
2	3AA	
3	4T	
4	4U	
5	7AA	
6	6AA	
7	7V	
8	7V	
9	6Z	
10	4Y	
11	4W	
12	5Y	
13	7AA	
14	6AA	
15	6V	
1	2Z	
2	2AA	
3	2X	
4	2W	
5	4AA	
7	4Y	
8	4X	
11	5Y	
12	6V	
14	4V	

SUB CIRCUIT UNIT  
(X13-645X-XX)

IC1

1	ON 5.0V OFF 14.7V
2	—
3	5.0V
4	2.5V
5	—
6	2.5V
7	—
8	2.5V
9	—
10	2.5V
11	—
12	-16.7V
13,14	—

IC2

1,2	—
3	5.0V
4	2.5V
5	—
6	2.5V
7	—
8	2.5V
9	—
10	2.5V
11	—
12	-16.7V
13,14	—

IC3,4

1	-29.8V
2,3	—
4	ON 5.0V OFF 14.7V
5	-11.6V
6	—
7	-11.6V
8-42	—

IC5

IN	-16.6V
OUT	-11.6V
GND	—

IC7

IN	5.2V
OUT	5.2V
GND	—

IC8

1-17	—
18	ON 5.0V OFF 1.5V
19	—
20	5.2V

IC11

IN	10.9V
OUT	5.7V
GND	0.6V

IC12

1	-2.4V
2,3	0V
4	-14.9V
5,6	5.3V
7	3.6V
8	14.8V

IC14

1	5.1V
2-26	—
27	5.0V
28-37	—
38	5.0V
39-63	—
64	5.0V

Q1

E	4.9V
C	4.8V
B	4.1V

Q2

E	0V
C	—
B	0.7V

Q3

E	—
C	3.5V
B	0V

Q4

E	—
C	0V
B	0.7V

Q5

E	19.5V
C	14.8V
B	18.9V

Q6

E	-19.9V
C	-14.9V
B	-15.5V

Q7

E	29.4V
C	39.6V
B	30.0V

Q8

E	14.8V
C	30.0V
B	15.4V

Q9

E	-28.8V
C	-34.2V
B	-30.4V

Q10

E	5.9V
C	5.8V
B	5.1V

Q11

E	—
C	5.0V
B	0V

Q12

E	—
C	0V
B	0.7V

Q13

E	3.2V
C	18.9V
B	3.8V

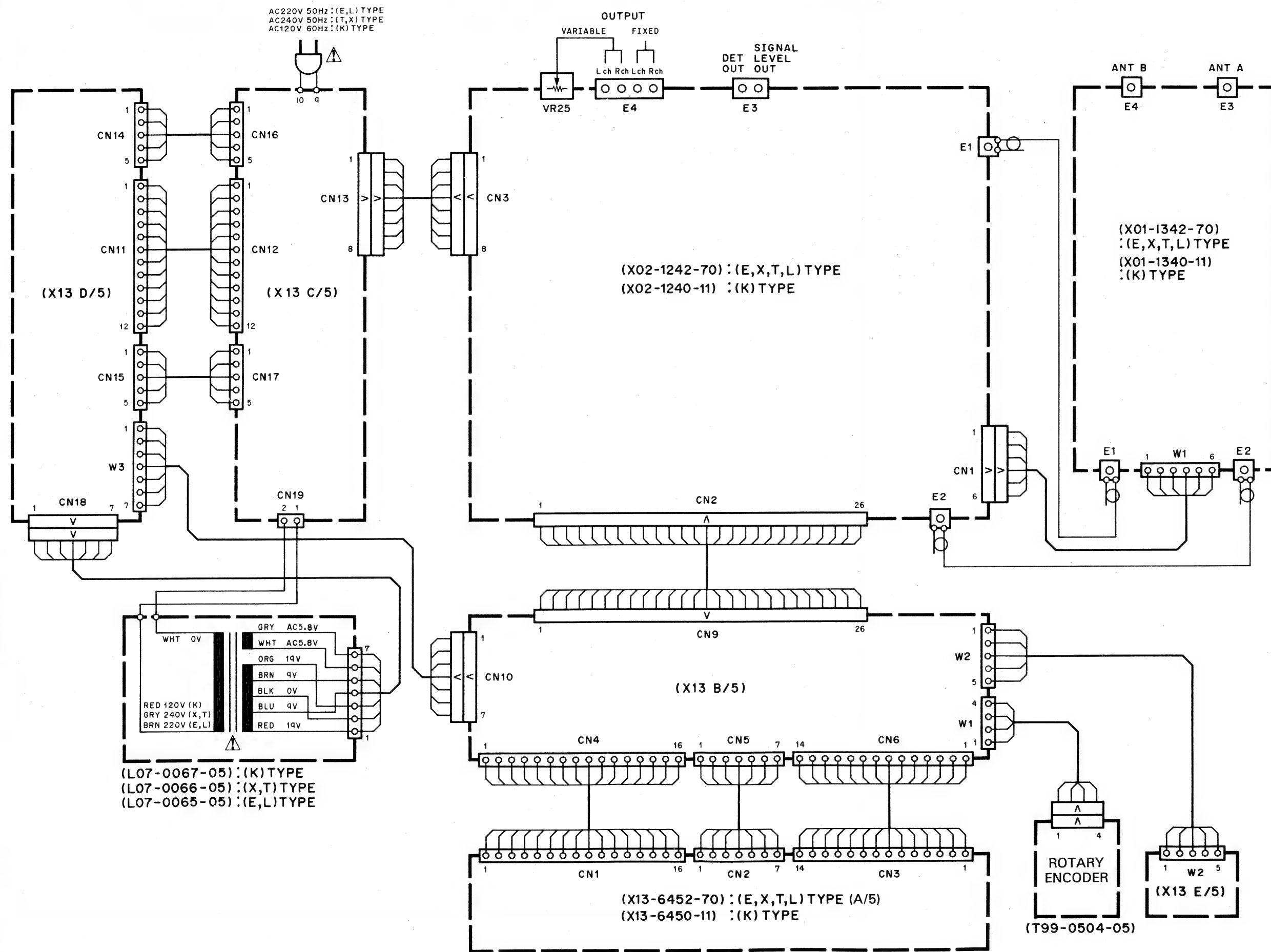
Q14

E	-1.9V
C	-15.5V
B	-2.5V

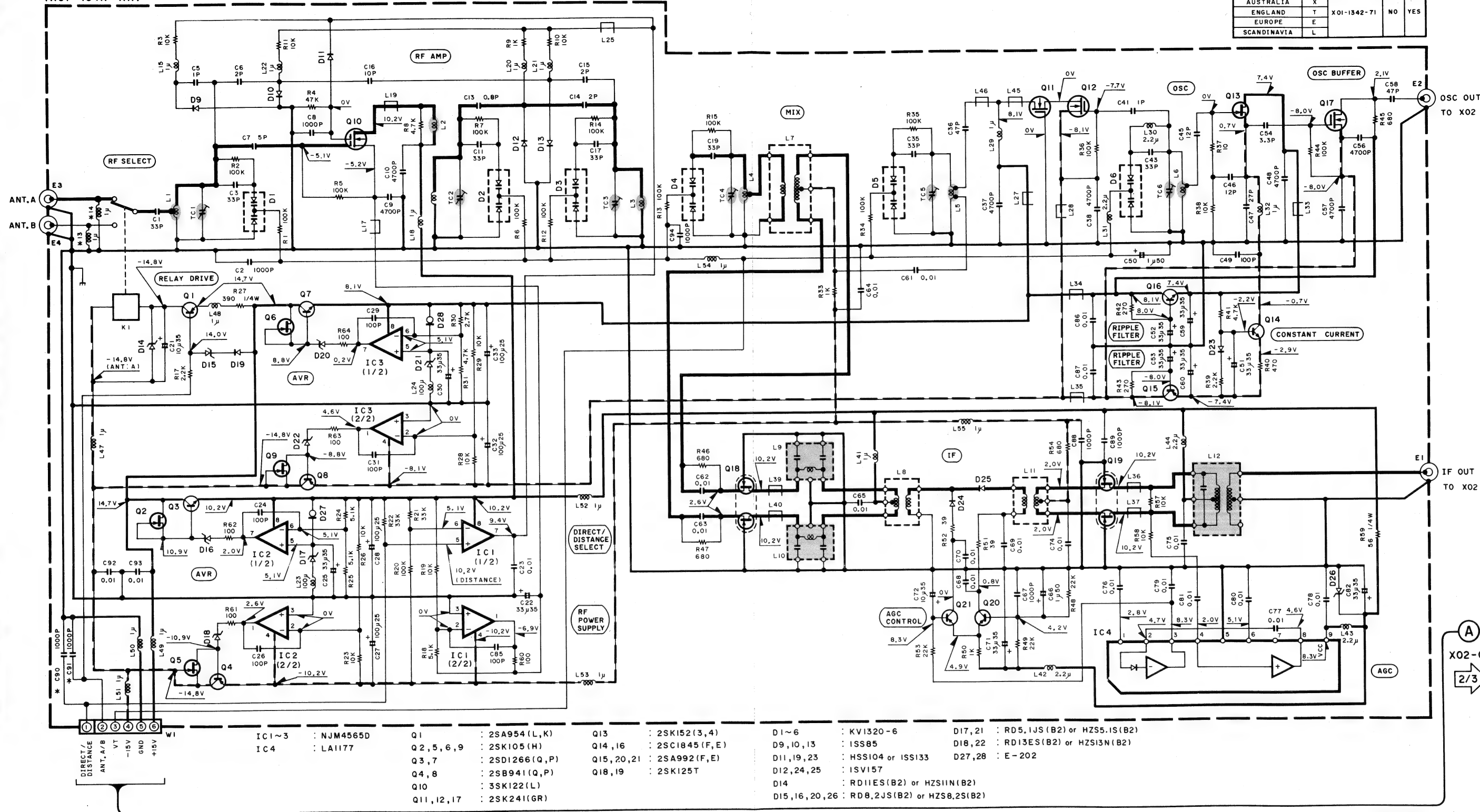
Q15

G	5.3V
D	14.8V
S	5.3V

1  
2  
3  
4  
5  
6  
7



(X01-134X-XX)



DC voltages are as measured with a high-impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

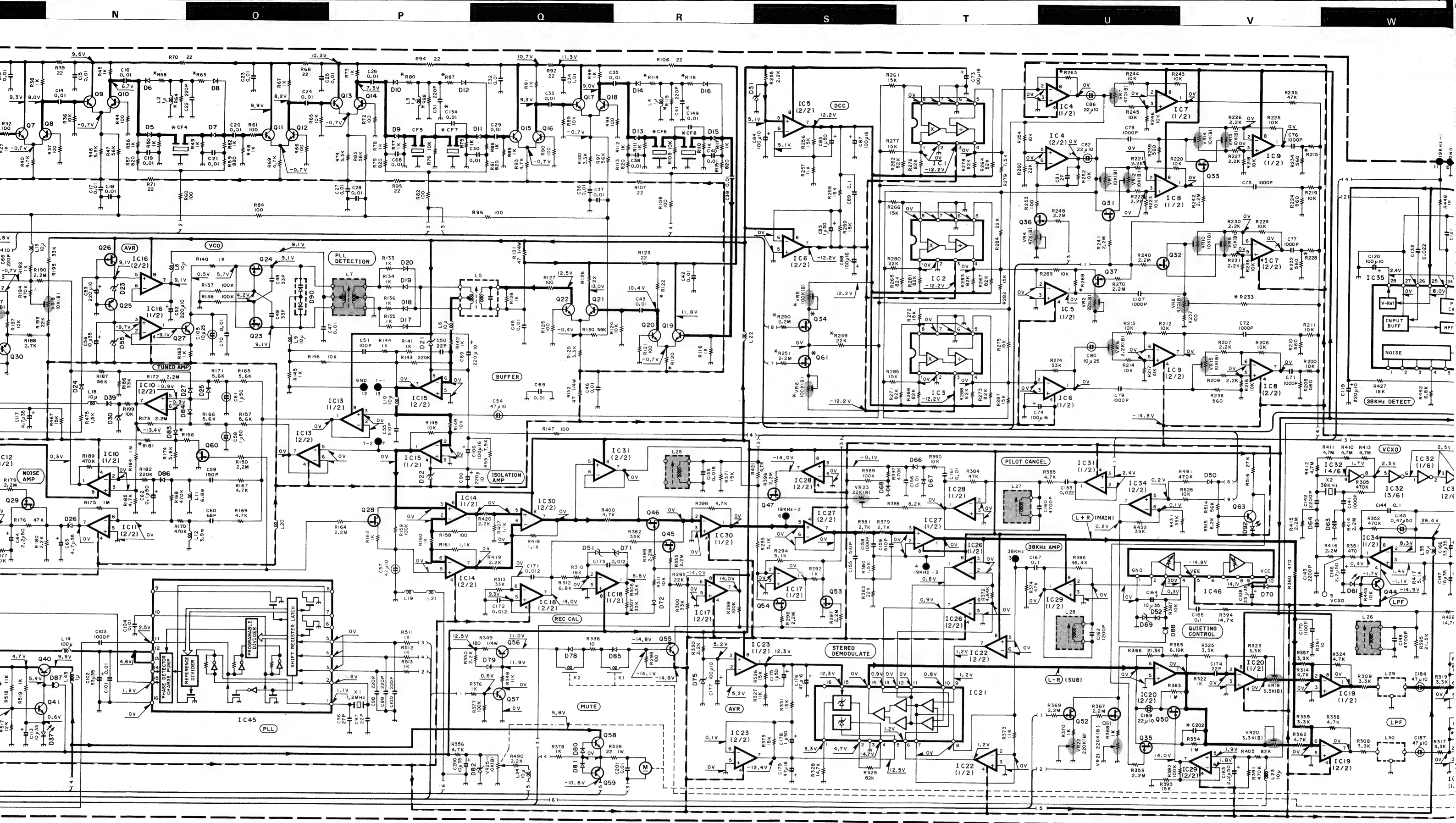
Y07-3322-70

**L-1000T**  
**KENWOOD**

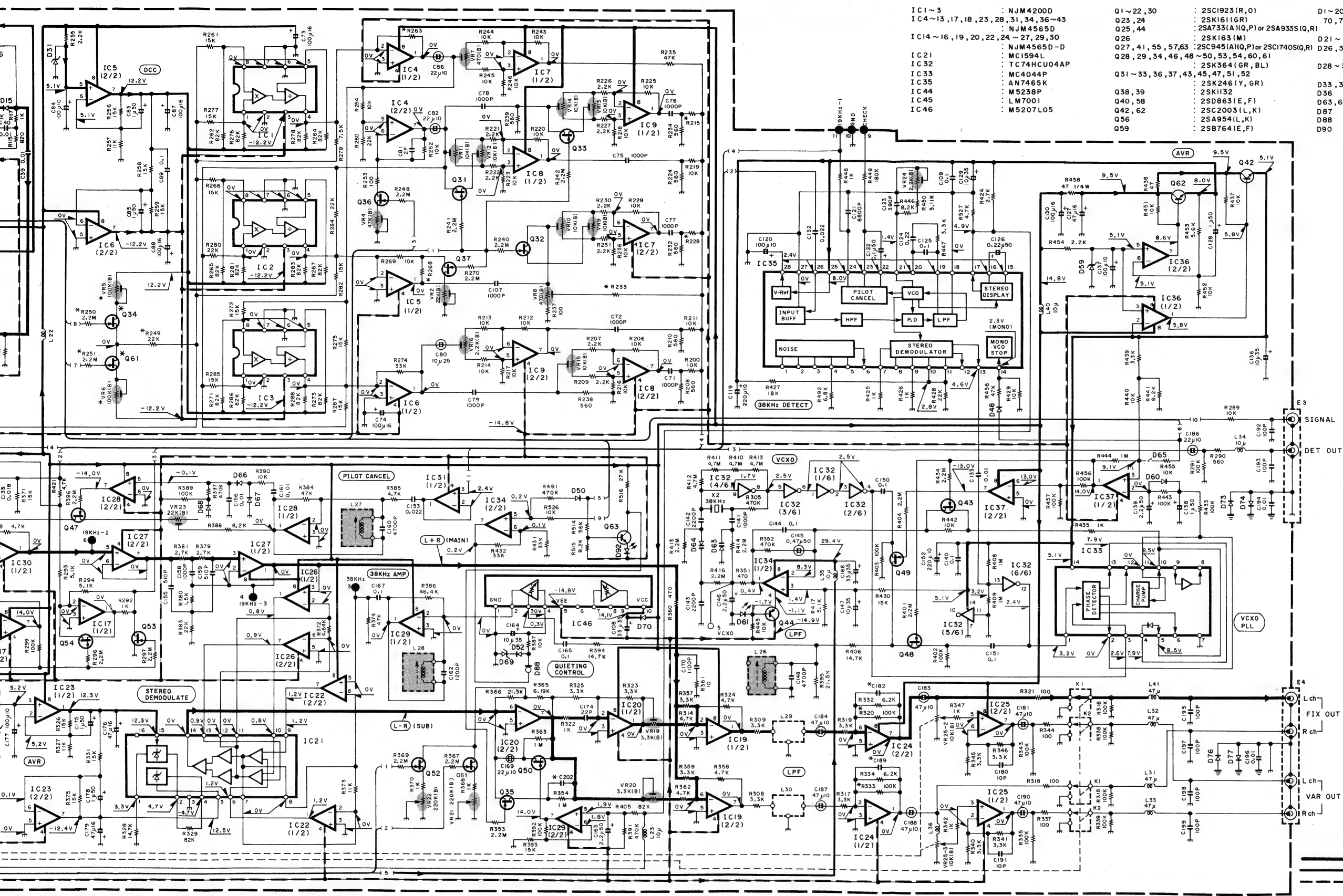








DC voltages are as measured with meter during reception of the FM signal strength of 60 dB at the antenna. Values may vary slightly due to individual instruments or/and units. All voltages are as measured during reception signal (with a signal strength of 60 dB at the antenna).



- |                                       |              |  |                                  |  |
|---------------------------------------|--------------|--|----------------------------------|--|
| IC1~3                                 | : NJM4200D   | Q1~22, 30                              | : 2SC1923(R,O)                   | D1~20, 24, 25, 27, 32, 39~50, 53, 54, 58, 60, 62, 65 |
| IC4~13, 17, 18, 23, 28, 31, 34, 36~43 | : NJM4565D   | Q23, 24                                | : 2SK161 (GR)                    | 70, 72~74, 76~81, 83~85, 91                          |
|                                       | : NJM4565D   | Q25, 44                                | : 2SA733(A,Q,P) or 2SA933S(Q,R)  | : ISS133 or HSS104                                   |
| IC14~16, 19, 20, 22, 24~27, 29, 30    | : NJM4565D-D | Q26                                    | : 2SK163 (M)                     | D21~23, 34   |
|                                       | : NJM4565D-D | Q27, 41, 55, 57, 63                    | : 2SC945(AHQ,P) or 2SC1740S(Q,R) | : RD8.2JS (B2) or HZS8.2S(B2)                        |
| IC21                                  | : MC1594L    | Q28, 29, 34, 46, 48~50, 53, 54, 60, 61 |                                  | D26, 38, 57, 66~68, 86, 89                           |
| IC32                                  | : TC74HC04AP |  | : 2SK364 (GR, BL)                | : SD103A   |
| IC33                                  | : MC0404P    | Q31~33, 36, 37, 43, 45, 47, 51, 52     |                                  | D28~31, 51, 55, 56, 59, 69, 71, 75, 82               |
| IC35                                  | : AN7465K    |  | : 2SK246 (Y, GR)                 | : RD5.1JS (B2) or HZS5.1S (B2)                       |
| IC44                                  | : M5238P     | Q38, 39                                | : 2SK1132                        | : LTZ-MR15   |
| IC45                                  | : LM7001     | Q40, 58                                | : 2SD863 (E, F)                  | : E-352  |
| IC46                                  | : M5207L05   | Q42, 62                                | : 2SC2003 (L, K)                 | : IT33C  |
|                                       |              | Q56                                    | : 2SA954 (L, K)                  | : E-272  |
|                                       |              | Q59                                    | : 2SB764 (E, F)                  | : E-452  |
|                                       |              |  |                                  | : KVI226(X)  |
|                                       |              |  |                                  | D90  |

DESTINATION		UNIT NAME	R28.34 56.63	R35, 64	R80, 87	R114, 118	R119	R120	R122	R155	R178	R181	R215	R228	R233	R269~251, 320, 333, 481, 482, 505, 506	R269
COUNTRY	ABB																
AUSTRALIA	X																
ENGLAND	T	X02-1242-70	75	240	150	100	220	22	2.2K	2.2K	10K	33K	180K	4.7K	22K		47K
EUROPE	E															YES	33K
SCANDINAVIA	L																
USA	K	X02-1240-11	130	130	75	240	75	240	4.7K	1K	5.6K	10K	91K	4.7K	10K	NO	33K

X13-B/5  
- CN9


3/3

(B)

X13-C/5

3/3

DC voltages are as measured with a high-impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

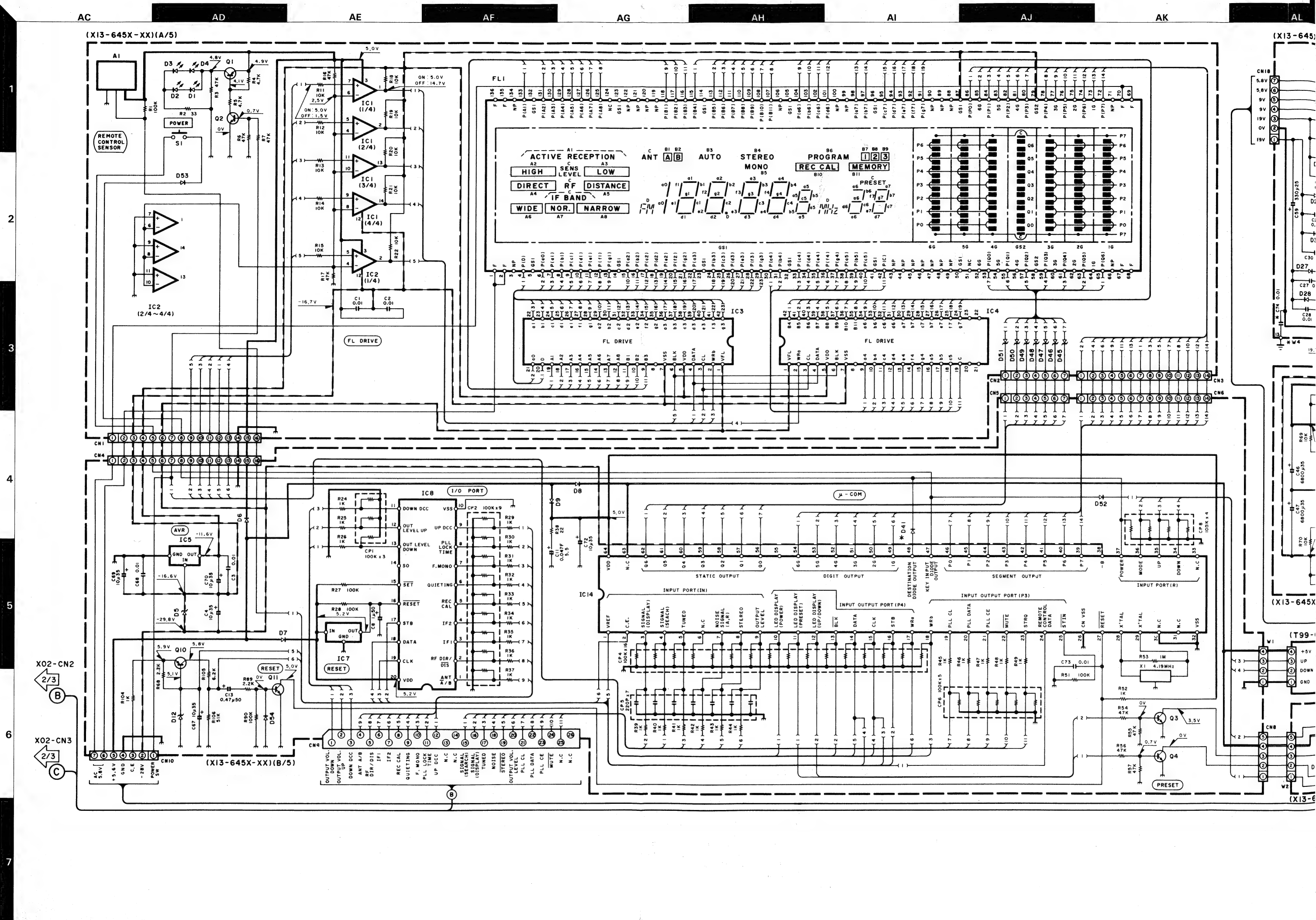
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

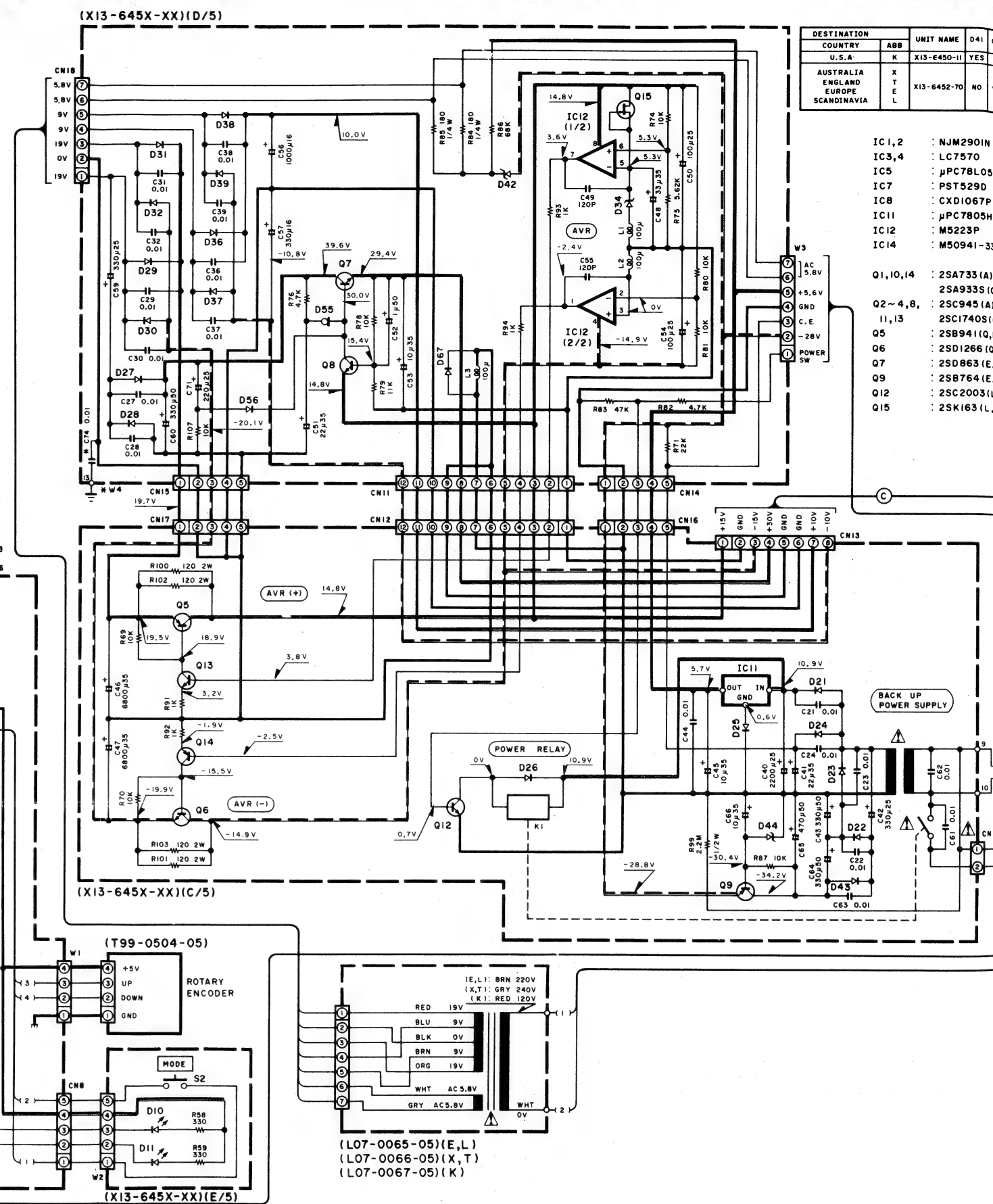
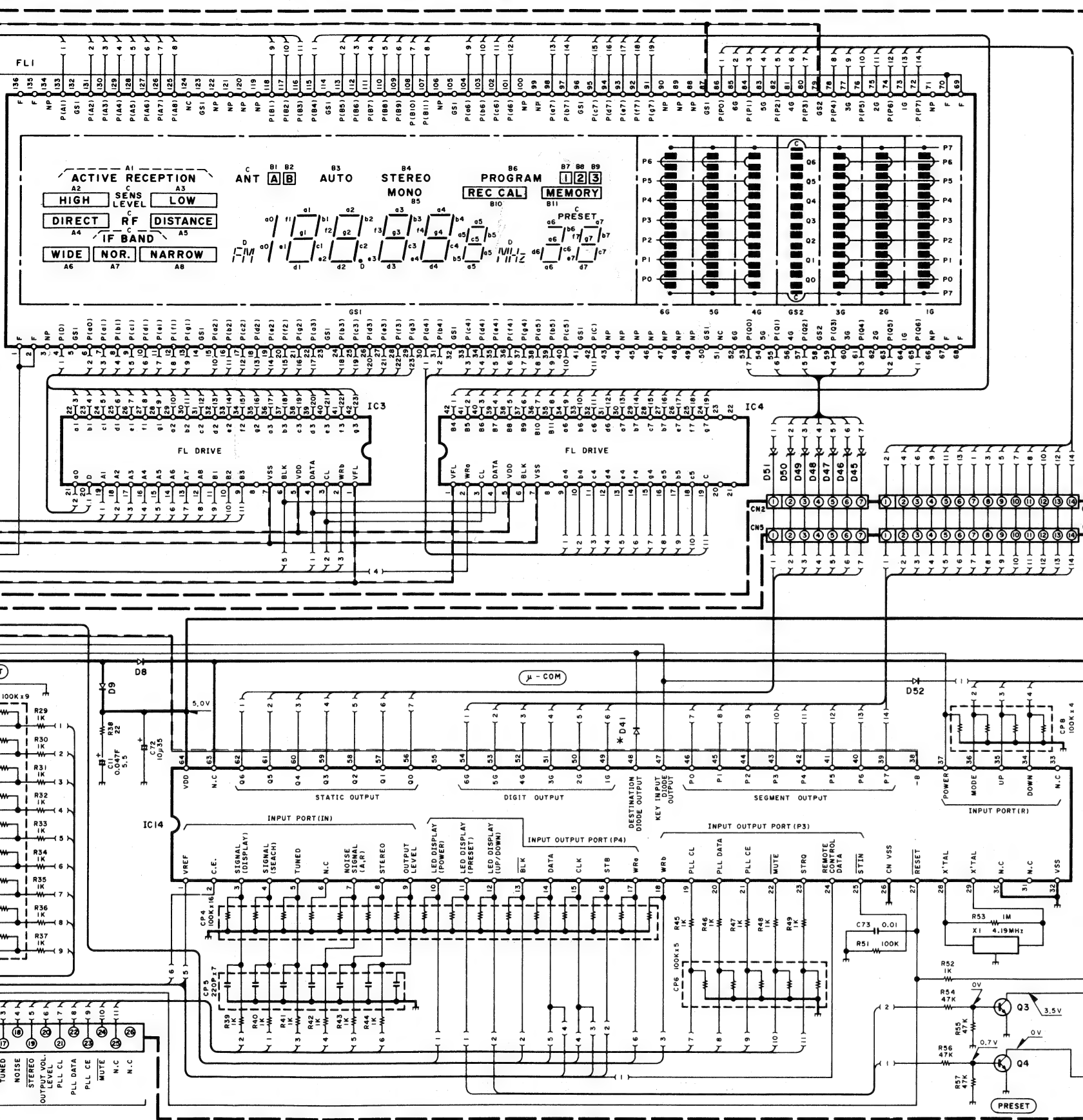
L-1000T(E)(2/3)

Y07-3322-70

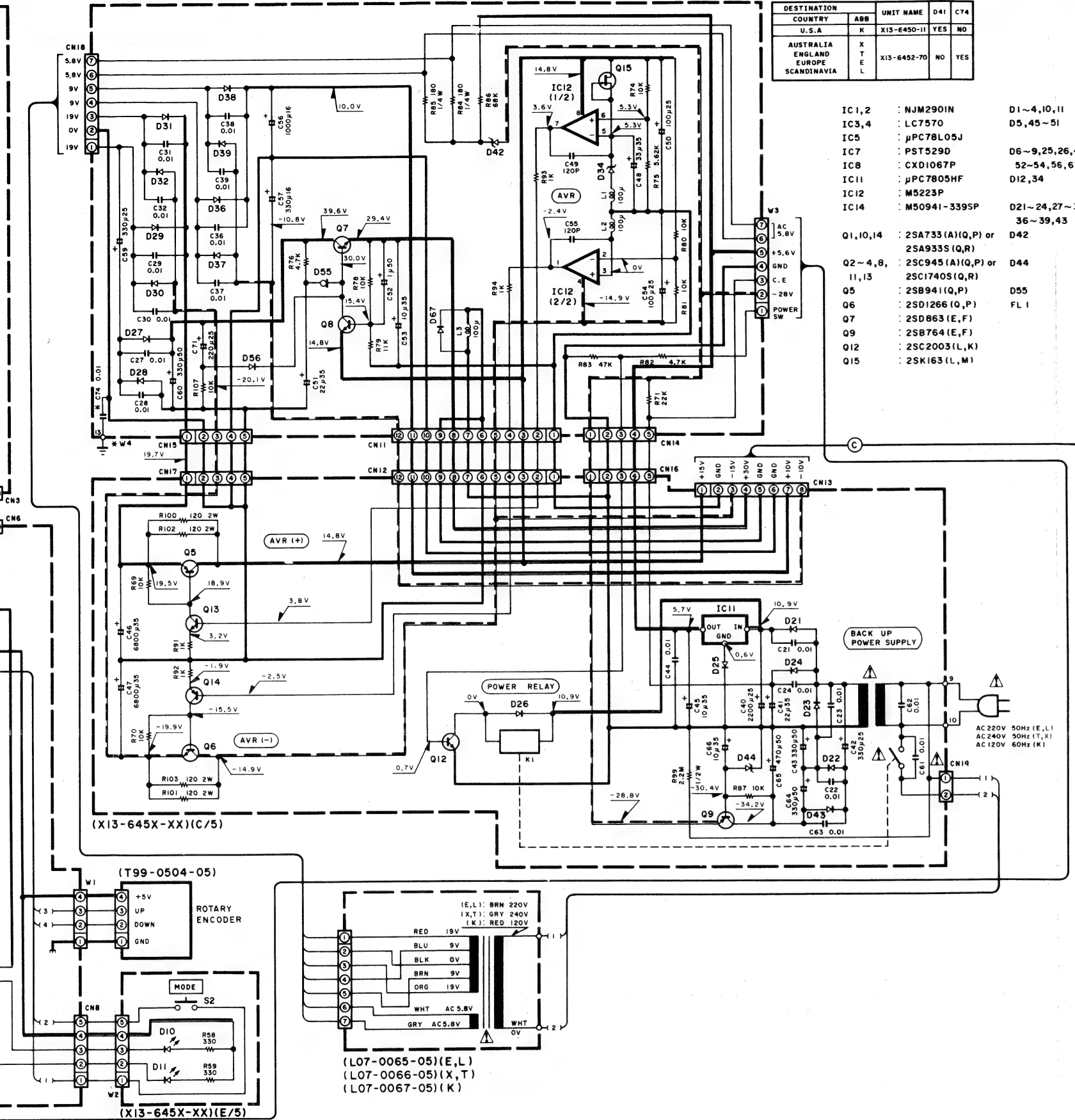
**L-1000T**  
**KENWOOD**







(X13-645X-XX)(D/5)



L-1000T(E)(3/3)

2SA733  
 2SA954  
 2SA992  
 2SB764  
 2SC1845  
 2SC1923  
 2SC2003  
 2SC945  
 2SD863

2SD1266

2SA933S  
 2SC1740S

2SB941

NJM4200D

M5207L05

M5238P

AN7465K

NJM2901N

MC4044P  
 TC74HCU04AP

LM7001

MC1594L

LA1177

CXD1067P

M5223P  
 NJM4565D  
 NJM4565D-D

LC7570

 $\mu$ PC7805HF

PST529D

 $\mu$ PC78L05J

DC voltages are as measured with a high-impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y07-3322-70

**L-1000T**  
**KENWOOD**



## EXPLODED VIEW



## L-1000T

## PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
<b>L-1000T</b>						
601	1B		A09-0100-08	BATTERY COVER		
602	3A	*	A20-6016-05	PANEL		
603	1B	*	A70-0350-05	REMOTE CONTROLLER ASSY	EL	
603	1B	*	A70-0357-05	REMOTE CONTROLLER ASSY	KXT	
609	1C, 3D	*	A50-0336-03	SIDE PLATE ASSY		
611	1A	*	A52-0141-12	TOP PLATE ASSY		
617	2A		B07-1921-03	ESCUTCHEON (POWER)		
618	3A		B07-1928-04	ESCUTCHEON (MODE)		
619	3A	*	B10-1080-04	FRONT GLASS		
620	3A		B19-1502-04	LIGHTING BOARD		
621	3B		B12-0133-04	INDICATOR		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0122-13	WARRANTY CARD	EL	
-			B46-0143-13	WARRANTY CARD	T	
-			B58-0803-13	CAUTION CARD	E	
-		*	B60-0082-00	INSTRUCTION MANUAL(ENGLISH)		
-		*	B60-0083-00	INSTRUCTION MANUAL(FRENCH)	EL	
-		*	B60-0084-00	INSTRUCTION MANUAL(G,D,I)	EL	
625	1D		E04-0006-05	RF COAXIAL CABLE RECEPTACLE		
626	1D		E29-0130-04	LEAD PLATE		
627	1D		E30-0459-05	AC POWER CORD	L	
627	1D		E30-0974-05	AC POWER CORD	K	
627	1D		E30-1341-05	AC POWER CORD	X	
627	1D		E30-1416-05	AC POWER CORD	T	
627	1D		E30-2580-05	AC POWER CORD	E	
628	1B		E30-2600-05	CORD WITH PLUG		
629	1C	*	E31-7488-05	WIRING HARNESS		
633	1C		E40-4278-05	SOCKET FOR PIN ASSY		
636	3B	*	F39-0051-04	REINFORCING BAR		
643	3B	*	G13-0257-04	CUSHION		
644	1D	*	G13-0258-04	CUSHION		
645	1B	*	G13-0260-04	CUSHION		
-		*	H01-8761-04	ITEM CARTON CASE		
-			H10-3930-02	POLYSTYRENE FOAMED FIXTURE		
-			H10-3931-12	POLYSTYRENE FOAMED FIXTURE		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-			H25-0391-04	PROTECTION BAG		
-		*	H25-0396-14	PROTECTION BAG		
650	3C		J02-1054-05	FOOT		
651	3B		J19-0506-05	UNIT HOLDER		
652	2C		J19-3242-05	HOLDER		
654	3C		J39-0154-04	SPACER		
655	1D		J41-0024-15	POWER CORD BUSHING	E	
655	1D		J42-0083-05	POWER CORD BUSHING	KXTL	
656	3C		J61-0039-05	WIRE BAND		
-			J61-0307-05	WIRE BAND		
660	3A		K21-0418-04	KNOB (TUNING)		
661	1D		K29-3824-04	KNOB (LEVEL)		
662	3A		K29-3831-04	KNOB (POWER)		

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## L-1000T

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663	3A		K29-3832-04	KNOB (MODE)		
667	2B	*	L07-0065-05	POWER TRANSFORMER	EL	
667	2B	*	L07-0066-05	POWER TRANSFORMER	XT	
667	2B	*	L07-0067-05	POWER TRANSFORMER	K	
668	2B		L92-0025-05	FERRITE CORE		
A	3A		N09-1445-05	SET SCREW (M3X8)		
B	1A, 1D		N09-2706-05	TAPTITE SCREW		
C	1C, 3D		N09-2707-15	DRESSED SCREW		
D	1D	*	N09-2766-05	MACHINE SCREW (3X8)		
E	1D, 3C		N09-2776-05	SEMS (TAPTITE SCREW)		
F	3A	*	N09-2786-05	SEMS (TAPTITE SCREW)		
G	3A		N89-3006-45	BINDING HEAD TAPTITE SCREW		
H	1C, 2D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
J	3C		N89-3014-45	BINDING HEAD TAPTITE SCREW		
K	2B		N90-4008-46	TP HEAD MACHINE SCREW		
673	1B		T90-0132-05	T TYPE ANTENNA		
674	1B		T90-0136-05	ANTENNA ADAPTOR		
675	3A	*	T99-0504-05	SPEED DETECTOR		
<b>FRONT END UNIT (X01-134X-XX; 0-11: K, 2-70: E, X, L, T)</b>						
C1			CC45FSL1H330J	CERAMIC 33PF	J	
C2			CF92FV1H102J	MF 1000PF	J	
C3			CC45FPH1H330J	CERAMIC 33PF	J	
C5		*	CC45FCH1H010C	CERAMIC 1.0PF	C	
C6		*	CC45FCH1H020C	CERAMIC 2.0PF	C	
C7			CC45FCH1H050C	CERAMIC 5.0PF	C	
C8			C91-0757-05	CERAMIC 1000PF	K	
C9 , 10			CK45FF1H472Z	CERAMIC 4700PF	Z	
C11			CC45FPH1H330J	CERAMIC 33PF	J	
C13		*	C91-1426-05	CERAMIC 0.8PF	C	
C14 , 15		*	CC45FCH1H020C	CERAMIC 2.0PF	C	
C16			CC45FSL1H100D	CERAMIC 10PF	D	
C17			CC45FPH1H330J	CERAMIC 33PF	J	
C19			CC45FPH1H330J	CERAMIC 33PF	J	
C21			CE04KW1V100M	ELECTRO 10UF	35WV	
C22			CE04KW1V330M	ELECTRO 33UF	35WV	
C23			CF92FV1H103J	MF 0.010UF	J	
C24			CF92FV1H101K	MF 100PF	K	
C25			CE04KW1V330M	ELECTRO 33UF	35WV	
C26			CF92FV1H101K	MF 100PF	K	
C27 , 28			CE04KW1E101M	ELECTRO 100UF	25WV	
C29			CF92FV1H101K	MF 100PF	K	
C30			CE04KW1V330M	ELECTRO 33UF	35WV	
C31			CF92FV1H101K	MF 100PF	K	
C32 , 33			CE04KW1E101M	ELECTRO 100UF	25WV	
C35			CC45FCH1H330J	CERAMIC 33PF	J	
C36			CC45FSL1H470J	CERAMIC 47PF	J	
C37 , 38			CK45FF1H472Z	CERAMIC 4700PF	Z	
C41		*	CC45FCH1H010C	CERAMIC 1.0PF	C	
C43			CC45FCH1H330J	CERAMIC 33PF	J	
C45 , 46			CC45FCH1H120J	CERAMIC 12PF	J	
C47			CC45FCH1H270J	CERAMIC 27PF	J	
C48			CK45FF1H472Z	CERAMIC 4700PF	Z	
C49			CF92FV1H101K	MF 100PF	K	
C50			CE04KW1H010M	ELECTRO 1.0UF	50WV	

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C51 -53			CE04KW1V330M	ELECTRO 33UF 35WV		
C54		*	C91-0715-05	CERAMIC 3.3PF K		
C56 ,57			CK45FF1H472Z	CERAMIC 4700PF Z		
C58			CC45FSL1H470J	CERAMIC 47PF J		
C59 ,60			CE04KW1V330M	ELECTRO 33UF 35WV		
C61 -65			CF92FV1H103J	MF 0.010UF J		
C66			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C67			CF92FV1H102J	MF 1000PF J		
C68 -70			CF92FV1H103J	MF 0.010UF J		
C71			CE04KW1V330M	ELECTRO 33UF 35WV		
C72			CE04KW1V100M	ELECTRO 10UF 35WV		
C74 -76			CF92FV1H103J	MF 0.010UF J		
C77			C91-0769-05	CERAMIC 0.01UF K		
C78 -80			CF92FV1H103J	MF 0.010UF J		
C81			C91-0769-05	CERAMIC 0.01UF K		
C82			CE04KW1V330M	ELECTRO 33UF 35WV		
C85			CF92FV1H101K	MF 100PF K		
C86 ,87			CF92FV1H103J	MF 0.010UF J		
C88 ,89			CF92FV1H102J	MF 1000PF J		
C90 ,91			CF92FV1H102J	MF 1000PF J	EXTL	
C92 ,93			CF92FV1H103J	MF 0.010UF J		
C94			CF92FV1H102J	MF 1000PF J		
TC1 -6			C05-0302-05	CERAMIC TRIMMER CAPACITOR(11PF)		
E1		*	E13-0194-05	PHONE JACK (1P)(IF OUT)		
E2		*	E13-0195-05	PHONE JACK (1P)(OSC OUT)		
E3 ,4		*	E13-0194-05	PHONE JACK (1P)(ANT A,B)		
L1			L31-0545-05	FM-RF COIL		
L2			L31-0546-05	FM-RF COIL		
L3 ,4			L31-0545-05	FM-RF COIL		
L5 ,6		*	L32-0400-05	FM OSCILLATING COIL		
L7 ,8		*	L19-0070-05	BALUN TRANSFORMER		
L9 ,10			L30-0381-05	FM IFT		
L11		*	L19-0070-05	BALUN TRANSFORMER		
L12		*	L30-0486-05	FM IFT		
L13 -15			L40-1091-17	SMALL FIXED INDUCTOR(1UH)	K	
L15			L40-1091-17	SMALL FIXED INDUCTOR(1UH)	EXTL	
L17			L92-0017-05	FERRITE CORE		
L18			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L19		*	L92-0027-05	FERRITE CORE		
L20			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L21 ,22			L40-1091-16	SMALL FIXED INDUCTOR(1UH)		
L23 ,24			L40-1011-17	SMALL FIXED INDUCTOR(100UH,K)		
L25			L92-0017-05	FERRITE CORE		
L27 ,28		*	L92-0027-05	FERRITE CORE		
L29			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L30 ,31			L40-2291-16	SMALL FIXED INDUCTOR(2.2UH)		
L32			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L33 -35			L92-0017-05	FERRITE CORE		
L36 ,37		*	L92-0027-05	FERRITE CORE		
L39 ,40		*	L92-0027-05	FERRITE CORE		
L41			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L42 -44			L40-2291-17	SMALL FIXED INDUCTOR(2.2UH)		
L45 ,46		*	L92-0027-05	FERRITE CORE		
L47 -55			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		

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R27 R59			RD14GB2E391J RD14GB2E560J	FL-PROOF RD 390 J 1/4W FL-PROOF RD 56 J 1/4W		
K1		*	S51-1058-05	MAGNETIC RELAY		
D1 -6 D9 ,10 D11 D11 D12			KV1320-6 1SS85 HSS104 1SS133 1SV157	VARIABLE CAPACITANCE DIODE DIODE DIODE DIODE DIODE		
D13 D14 D14 D15 ,16 D15 ,16		*	1SS85 HZS11N(B2) RD11ES(B2) HZS8.2S(B2) RD8.2JS(B2)	DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D17 D17 D18 D18 D19			HZS5.1S(B2) RD5.1JS(B2) HZS13N(B2) RD13ES(B2) HSS104	ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE DIODE		
D19 D20 D20 D21 D21			1SS133 HZS8.2S(B2) RD8.2JS(B2) HZS5.1S(B2) RD5.1JS(B2)	DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D22 D22 D23 D23 D24 ,25		*	HZS13N(B2) RD13ES(B2) HSS104 1SS133 1SV157	ZENER DIODE ZENER DIODE DIODE DIODE DIODE		
D26 D26 D27 ,28 IC1 -3 IC4		*	HZS8.2S(B2) RD8.2JS(B2) E-202 NJM4565D LA1177	ZENER DIODE ZENER DIODE CONSTANT CURRENT DIODE IC(OP AMP X2) IC(MIC/IF/OSC)		
Q1 Q2 Q3 Q4 Q5 ,6			2SA954(L,K) 2SK105(H) 2SD1266(Q,P) 2SB941(Q,P) 2SK105(H)	TRANSISTOR FET TRANSISTOR TRANSISTOR FET		
Q7 Q8 Q9 Q10 Q11 ,12			2SD1266(Q,P) 2SB941(Q,P) 2SK105(H) 3SK122(L) 2SK241(GR)	TRANSISTOR TRANSISTOR FET FET FET		
Q13 Q14 Q15 Q16 Q17			2SK152(3,4) 2SC1845(F,E) 2SA992(F,E) 2SC1845(F,E) 2SK241(GR)	FET TRANSISTOR TRANSISTOR TRANSISTOR FET		
Q18 ,19 Q20 ,21			2SK125T 2SA992(F,E)	DUAL FET TRANSISTOR		
IF UNIT (X02-124X-XX; 0-11:K, 2-70: E, X, L, T)						
D33 D35			LTZ-MR15 LTZ-MR15	LED LED		

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D37			LTZ-MR15	LED		
D61			LTZ-MR15	LED		
D92			LTZ-MR15	LED		
C1 ,2			CF92FV1H103J	MF 0.010UF J		
C3			CK45FF1H103Z	CERAMIC 0.010UF Z		
C4 -8			CF92FV1H103J	MF 0.010UF J		
C9			CK45FF1H103Z	CERAMIC 0.010UF Z		
C10 ,11			CF92FV1H103J	MF 0.010UF J		
C12			C91-0749-05	CERAMIC 220PF K		
C13 -17			CF92FV1H103J	MF 0.010UF J		
C18			CK45FF1H103Z	CERAMIC 0.010UF Z		
C19 -21			CF92FV1H103J	MF 0.010UF J		
C22			C91-0749-05	CERAMIC 220PF K		
C23 -27			CF92FV1H103J	MF 0.010UF J		
C28			CK45FF1H103Z	CERAMIC 0.010UF Z		
C29 ,30			CF92FV1H103J	MF 0.010UF J		
C31			C91-0749-05	CERAMIC 220PF K		
C32 -36			CF92FV1H103J	MF 0.010UF J		
C37			CK45FF1H103Z	CERAMIC 0.010UF Z		
C38 -40			CF92FV1H103J	MF 0.010UF J		
C41			C91-0749-05	CERAMIC 220PF K		
C42 ,43			CF92FV1H103J	MF 0.010UF J		
C45 -47			CF92FV1H103J	MF 0.010UF J		
C48 ,49			CC45FTH1H330J	CERAMIC 33PF J		
C50			CC45FSL1H220J	CERAMIC 22PF J		
C51			CQ09FS1H101J	POLYSTY 100PF J		
C52 ,53			CE04KW1A221M	ELECTRØ 220UF 10WV		
C54			C90-1334-05	NP-ELEC 47UF 10WV		
C55			CQ09FS1H511J	POLYSTY 510PF J		
C56			CE04KW1V100M	ELECTRØ 10UF 35WV		
C57			C90-1334-05	NP-ELEC 47UF 10WV		
C58			C90-1349-05	NP-ELEC 1UF 50WV		
C59			CC45FSL1H151J	CERAMIC 150PF J		
C60			CC45FSL1H680J	CERAMIC 68PF J		
C61			C90-1349-05	NP-ELEC 1UF 50WV		
C62			CE04KW1H0R1M	ELECTRØ 0.1UF 50WV		
C63			CE04KW1V4R7M	ELECTRØ 4.7UF 35WV		
C64			CE04KW1H2R2M	ELECTRØ 2.2UF 50WV		
C65			CE04KW1HR47M	ELECTRØ 0.47UF 50WV		
C66			CC45FSL1H221J	CERAMIC 220PF J		
C67 ,68			CF92FV1H103J	MF 0.010UF J		
C69			CE04KW1A221M	ELECTRØ 220UF 10WV		
C70			CF92FV1H103J	MF 0.010UF J		
C71 ,72			CF92FV1H102J	MF 1000PF J		
C73 ,74			CE04KW1C101M	ELECTRØ 100UF 16WV		
C75 -79			CF92FV1H102J	MF 1000PF J		
C80			C90-1332-05	NP-ELEC 10UF 25WV		
C81			CC45FSL1H020C	CERAMIC 2.0PF C		
C82			C90-1333-05	NP-ELEC 22UF 10WV		
C83			CE04KW1H010M	ELECTRØ 1.0UF 50WV		
C84			CE04KW1A101M	ELECTRØ 100UF 10WV		
C85			CE04KW1H010M	ELECTRØ 1.0UF 50WV		
C86			C90-1333-05	NP-ELEC 22UF 10WV		
C87 ,88			CE04KW1C101M	ELECTRØ 100UF 16WV		

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# L-1000T

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C89			CF92FV1H104J	MF 0.10UF J		
C90			CE04KW1A221M	ELECTRØ 220UF 10WV		
C91			CE04KW1V101M	ELECTRØ 100UF 35WV		
C92			CE04KW1V330M	ELECTRØ 33UF 35WV		
C93			C90-1456-05	NP-ELEC 0.22UF 50WV		
C94			CF92FV1H103J	MF 0.010UF J		
C95			CE04KW1V101M	ELECTRØ 100UF 35WV		
C96			CC45FCH1H270J	CERAMIC 27PF J		
C97			CC45FCH1H220J	CERAMIC 22PF J		
C98 -100			C91-0749-05	CERAMIC 220PF K		
C101			CF92FV1H103J	MF 0.010UF J		
C102			CE04KW1V330M	ELECTRØ 33UF 35WV		
C103			CF92FV1H102J	MF 1000PF J		
C104			CF92FV1H103J	MF 0.010UF J		
C105			C90-1332-05	NP-ELEC 10UF 25WV		
C106			CE04KW1C101M	ELECTRØ 100UF 16WV		
C107			CF92FV1H102J	MF 1000PF J		
C108			CE04KW1V330M	ELECTRØ 33UF 35WV		
C109			CF92FV1H104J	MF 0.10UF J		
C110			CF92FV1H103J	MF 0.010UF J		
C111			CE04KW1H010M	ELECTRØ 1.0UF 50WV		
C112			CE04KW1A101M	ELECTRØ 100UF 10WV		
C113-115			CE04KW1V100M	ELECTRØ 10UF 35WV		
C116-118			CE04KW1V4R7M	ELECTRØ 4.7UF 35WV		
C119			CE04KW1A221M	ELECTRØ 220UF 10WV		
C120			CE04KW1A101M	ELECTRØ 100UF 10WV		
C121			CF92FV1H682J	MF 6800PF J		
C122			CE04KW1H0R1M	ELECTRØ 0.1UF 50WV		
C123		*	CQ93HP2A391J	MYLAR 390PF J		
C124			CF92FV1H224J	MF 0.22UF J		
C125			CF92FV1H104J	MF 0.10UF J		
C126			CE04KW1HR22M	ELECTRØ 0.22UF 50WV		
C127			CE04KW1C470M	ELECTRØ 47UF 16WV		
C128			CE04KW1H010M	ELECTRØ 1.0UF 50WV		
C129			CE04KW1V100M	ELECTRØ 10UF 35WV		
C130			CE04KW1C101M	ELECTRØ 100UF 16WV		
C131			CE04KW1V100M	ELECTRØ 10UF 35WV		
C132			CF92FV1H223J	MF 0.022UF J		
C133			CF92FV1H103J	MF 0.010UF J		
C134			CF92FV1H103J	MF 0.010UF J	K	
C135			CQ93HP2A183J	MYLAR 0.018UF J		
C136			CE04KW1V100M	ELECTRØ 10UF 35WV		
C137			CE04KW1A101M	ELECTRØ 100UF 10WV		
C138			CE04KW1H010M	ELECTRØ 1.0UF 50WV		
C139			CE04KW1H2R2M	ELECTRØ 2.2UF 50WV		
C140			CF92FV1H104J	MF 0.10UF J		
C141			CF92FV1H102J	MF 1000PF J		
C142, 143			CF92FV1H222J	MF 2200PF J		
C144			CF92FV1H104J	MF 0.10UF J		
C145			C90-1331-05	NP-ELEC 0.47UF 50WV		
C146			CE04KW1H2R2M	ELECTRØ 2.2UF 50WV		
C147			CE04KW1V100M	ELECTRØ 10UF 35WV		
C148			CQ93HP2A472J	MYLAR 4700PF J		
C149			CF92FV1H103J	MF 0.010UF J	K	
C150, 151			CF92FV1H104J	MF 0.10UF J		

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C152			CE04KW1A221M	ELECTRØ 220UF 10WV		
C153			CF92FV1H223J	MF 0.022UF J		
C154			CF92FV1H104J	MF 0.10UF J		
C155			CQ09FS1H511J	POLYSTY 510PF J		
C156			CF92FV1H103J	MF 0.010UF J		
C157			CE04KW1V101M	ELECTRØ 100UF 35WV		
C158			CQ09FS1H102J	POLYSTY 1000PF J		
C159			CQ09FS1H511J	POLYSTY 510PF J		
C160			CQ93HP2A472J	MYLAR 4700PF J		
C161			CF92FV1H103J	MF 0.010UF J		
C162			CQ93HP2A122J	MYLAR 1200PF J		
C163			CE04KW1H2R2M	ELECTRØ 2.2UF 50WV		
C164			CE04KW1V100M	ELECTRØ 10UF 35WV		
C165			CF92FV1H104J	MF 0.10UF J		
C166			CE04KW1V330M	ELECTRØ 33UF 35WV		
C167			CF92FV1H104J	MF 0.10UF J		
C168			CE04KW1V101M	ELECTRØ 100UF 35WV		
C169			C90-1333-05	NP-ELEC 22UF 10WV		
C170		*	CQ09FS1H112J	POLYSTY 1100PF J		
C171-173			CF92FV1H123J	MF 0.012UF J		
C174			CC45FSL1H220J	CERAMIC 22PF J		
C175			CE04KW1H010M	ELECTRØ 1.0UF 50WV		
C176			CE04KW1C470M	ELECTRØ 47UF 16WV		
C177			CE04KW1A101M	ELECTRØ 100UF 10WV		
C178			CE04KW1H010M	ELECTRØ 1.0UF 50WV		
C179			CE04KW1C470M	ELECTRØ 47UF 16WV		
C180			CC45FSL1H100D	CERAMIC 10PF D		
C181			C90-1334-05	NP-ELEC 47UF 10WV		
C182		*	CQ93HP2A123J	MYLAR 0.012UF J	K	
C182			CQ93HP2A822J	MYLAR 8200PF J	EXTL	
C183,184			C90-1334-05	NP-ELEC 47UF 10WV		
C185			CE04KW1V101M	ELECTRØ 100UF 35WV		
C186			C90-1333-05	NP-ELEC 22UF 10WV		
C187,188			C90-1334-05	NP-ELEC 47UF 10WV		
C189			CQ93HP2A123J	MYLAR 0.012UF J	K	
C189			CQ93HP2A822J	MYLAR 8200PF J	EXTL	
C190			C90-1334-05	NP-ELEC 47UF 10WV		
C191			CC45FSL1H100D	CERAMIC 10PF D		
C192,193			CC45FSL1H101J	CERAMIC 100PF J		
C194			CK45FF1H103Z	CERAMIC 0.010UF Z		
C195			CC45FSL1H101J	CERAMIC 100PF J		
C196			CK45FF1H103Z	CERAMIC 0.010UF Z		
C197-199			CC45FSL1H101J	CERAMIC 100PF J		
C200			CE04KW1V100M	ELECTRØ 10UF 35WV		
C201			CF92FV1H103J	MF 0.010UF J		
C202			CF92FV1H222J	MF 2200PF J		
C203,204			CE04KW1C470M	ELECTRØ 47UF 16WV		
C205			CE04KW1V330M	ELECTRØ 33UF 35WV		
CN2			E10-2604-05	FLAT CABLE CONNECTOR		
E1		*	E13-0194-05	PHONO JACK (1P)(IF IN)		
E2		*	E13-0195-05	PHONO JACK (1P)(OSC IN)		
E3	1D	*	E13-2207-05	PHONO JACK (2P)(DET OUT)		
E4	1D		E13-1401-05	PHONO JACK (4P)(OUTPUT)		
CF1 ,2			L72-0546-05	CERAMIC FILTER		

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CF3 ,4		*	L72-0116-05	CERAMIC FILTER	K	
CF3 ,4		*	L72-0565-05	CERAMIC FILTER	EXTL	
CF5		*	L72-0566-05	CERAMIC FILTER	EXTL	
CF5 ,6		*	L72-0566-05	CERAMIC FILTER	K	
CF6		*	L72-0567-05	CERAMIC FILTER	EXTL	
CF7		*	L72-0566-05	CERAMIC FILTER	EXTL	
CF8		*	L72-0567-05	CERAMIC FILTER	EXTL	
L1 -4			L40-1092-17	SMALL FIXED INDUCTOR(1UH,M)		
L5			L30-0416-05	FM IFT		
L6			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L7			L32-0294-05	FM OSCILLATING COIL		
L8 -10			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L11			L40-6825-29	SMALL FIXED INDUCTOR(6.8mH,J)		
L12		*	L40-3925-29	SMALL FIXED INDUCTOR(3.9mH,J)		
L13			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L14			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L15 -18			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L19 -22			L92-0017-05	FERRITE CORE		
L23 ,24			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L25 ,26		*	L35-0065-05	SMALL FIXED INDUCTOR(3.9mH,J)		
L27 ,28			L35-0059-05	MPX COIL		
L29 ,30		*	L79-0793-05	LC FILTER		
L31 -33			L40-4701-17	SMALL FIXED INDUCTOR(47UH,K)		
L34 ,35			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L36 -38			L92-0017-05	FERRITE CORE		
L40			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L41			L40-4701-17	SMALL FIXED INDUCTOR(47UH,K)		
L42 ,43			L40-1092-17	SMALL FIXED INDUCTOR(1UH,M)		
X1			L77-1122-05	CRYSTAL RESONATOR(7.2MHz)		
X2		*	L77-1180-05	CRYSTAL RESONATOR(38kHz)		
R131,132			RD14GB2E470J	FL-PROOF RD 47 J 1/4W		
R328			RN14BK2C1472F	RN 14.7K F 1/6W		
R349			RD14GB2E181J	FL-PROOF RD 180 J 1/4W		
R365			RN14BK2C6191F	RN 6.19K F 1/6W		
R366		*	RN14BK2C2152F	RN 21.5K F 1/6W		
R372			RN14BK2C4641F	RN 4.64K F 1/6W		
R373			RN14BK2C1102F	RN 11.0K F 1/6W		
R386		*	RN14BK2C4642F	RN 46.4K F 1/6W		
R394			RN14BK2C1472F	RN 14.7K F 1/6W		
R395		*	RN14BK2C2152F	RN 21.5K F 1/6W		
R406			RN14BK2C1472F	RN 14.7K F 1/6W		
R410-413		*	R92-1737-05	CARBON FILM RESISTOR 4.7M		
R458			RD14GB2E470J	FL-PROOF RD 47 J 1/4W		
R528			RS14KB3A220J	FL-PROOF RS 2.2 J 1W		
VR2			R12-3128-05	TRIM POT. 22K		
VR3			R12-6018-05	TRIM POT. 470K		
VR4			R12-3132-05	TRIM POT. 47K		
VR5 ,6			R12-5058-05	TRIM POT. 100K		
VR7 ,8			R12-0108-05	TRIM POT. 470		
VR9 -15			R12-3126-05	TRIM POT. 10K	EXTL	
VR16			R12-1085-05	TRIM POT. 2.2K		
VR17			R12-5060-05	TRIM POT. 220K		
VR18			R12-3126-05	TRIM POT. 10K		
VR19,20			R12-1087-05	TRIM POT. 3.3K		
VR21,22			R12-5060-05	TRIM POT. 220K		

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VR23 VR24 VR25	1C	*	R12-3128-05 R12-1085-05 R29-3031-05	TRIM POT. 22K TRIM POT. 2.2K POTENTIOMETER(10K)(VARIABLE)		
K1 ,2			S51-2089-05	MAGNETIC RELAY		
D1 -20 D1 -20 D21 -23 D21 -23 D24 ,25			HSS104 1SS133 HZS8.2S(B2) RD8.2JS(B2) HSS104	DIODE DIODE ZENER DIODE ZENER DIODE DIODE		
D24 ,25 D26 D27 D27 D28 -31			1SS133 SD103A HSS104 1SS133 HZS5.1S(B2)	DIODE DIODE DIODE DIODE ZENER DIODE		
D28 -31 D32 D32 D34 D34			RD5.1JS(B2) HSS104 1SS133 HZS8.2S(B2) RD8.2JS(B2)	ZENER DIODE DIODE DIODE ZENER DIODE ZENER DIODE		
D36 D38 D39 -41 D39 -41 D42 ,43			E-352 SD103A HSS104 1SS133 HSS104	CONSTANT CURRENT DIODE DIODE DIODE DIODE DIODE	EXTL	
D42 ,43 D44 -50 D44 -50 D51 D51			1SS133 HSS104 1SS133 HZS5.1S(B2) RD5.1JS(B2)	DIODE DIODE DIODE ZENER DIODE ZENER DIODE	EXTL	
D52 D53 ,54 D53 ,54 D55 ,56 D55 ,56			SD103A HSS104 1SS133 HZS5.1S(B2) RD5.1JS(B2)	DIODE DIODE DIODE ZENER DIODE ZENER DIODE		
D57 D58 D58 D59 D59			SD103A HSS104 1SS133 HZS5.1S(B2) RD5.1JS(B2)	DIODE DIODE DIODE ZENER DIODE ZENER DIODE		
D60 D60 D62 D62 D63 ,64		*	HSS104 1SS133 HSS104 1SS133 1T33C	DIODE DIODE DIODE DIODE VARIABLE CAPACITANCE DIODE		
D65 D65 D66 -68 D69 D69			HSS104 1SS133 SD103A HZS5.1S(B2) RD5.1JS(B2)	DIODE DIODE DIODE ZENER DIODE ZENER DIODE		
D70 D70 D71 D71 D72 -74			HSS104 1SS133 HZS5.1S(B2) RD5.1JS(B2) HSS104	DIODE DIODE ZENER DIODE ZENER DIODE DIODE		

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D72 -74 D75 D75 D76 -81 D76 -81			1SS133 HZS5.1S(B2) RD5.1JS(B2) HSS104 1SS133	DIODE ZENER DIODE ZENER DIODE DIODE DIODE		
D82 D82 D83 -85 D83 -85 D86			HZS5.1S(B2) RD5.1JS(B2) HSS104 1SS133 SD103A	ZENER DIODE ZENER DIODE DIODE DIODE DIODE		
D87 D88 D89 D90 D91			E-272 E-452 SD103A KV1226(X) HSS104	CONSTANT CURRENT DIODE CONSTANT CURRENT DIODE DIODE VARIABLE CAPACITANCE DIODE DIODE		
D91 IC1 -3 IC4 -13 IC14-16 IC17,18			1SS133 NJM4200D NJM4565D NJM4565D-D NJM4565D	DIODE IC(OP AMP X2) IC(OP AMP X2) IC(OP AMP X2) IC(OP AMP X2)		
IC19,20 IC21 IC22 IC23 IC24-27		*	NJM4565D-D MC1594L NJM4565D-D NJM4565D NJM4565D-D	IC(OP AMP X2) IC(4-QUADRANT MULTIPLIER) IC(OP AMP X2) IC(OP AMP X2) IC(OP AMP X2)		
IC28 IC29,30 IC31 IC32 IC33			NJM4565D NJM4565D-D NJM4565D TC74HCU04AP MC4044P	IC(OP AMP X2) IC(OP AMP X2) IC(OP AMP X2) IC(CMOS INVERTER) IC(PHASE-FREQ DETECTOR)		
IC34 IC35 IC36-43 IC44 IC45			NJM4565D AN7465K NJM4565D M5238P LM7001	IC(OP AMP X2) IC(38kHz DETECTOR) IC(OP AMP X2) IC(OP AMP) IC(PLL FREQUENCY SYNTHESIZER)		
IC46 Q1 -22 Q23 ,24 Q25 Q25		*	M5207L05 2SC1923(R,Ø) 2SK161(GR) 2SA733(A)(Q,P) 2SA933S(Q,R)	IC(ELECTRIC VR) TRANSISTOR FET TRANSISTOR TRANSISTOR		
Q26 Q27 Q27 Q28 ,29 Q30			2SK163(M) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SK364(GR,BL) 2SC1923(R,Ø)	FET TRANSISTOR TRANSISTOR FET TRANSISTOR		
Q31 -33 Q34 Q35 Q36 ,37 Q38 ,39			2SK246(Y,GR) 2SK364(GR,BL) 2SK364(GR,BL) 2SK246(Y,GR) 2SK1132	FET FET FET FET FET	EXTL	
Q40 Q41 Q41 Q42 Q43			2SD863(E,F) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SC2003(L,K) 2SK246(Y,GR)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR FET		

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Q44			2SA733(A)(Q,P)	TRANSISTOR		
Q44			2SA933S(Q,R)	TRANSISTOR		
Q45			2SK246(Y,GR)	FET		
Q46			2SK364(GR,BL)	FET		
Q47			2SK246(Y,GR)	FET		
Q48 -50			2SK364(GR,BL)	FET		
Q51 ,52			2SK246(Y,GR)	FET		
Q53 ,54			2SK364(GR,BL)	FET		
Q55			2SC1740S(Q,R)	TRANSISTOR		
Q55			2SC945(A)(Q,P)	TRANSISTOR		
Q56			2SA954(L,K)	TRANSISTOR		
Q57			2SC1740S(Q,R)	TRANSISTOR		
Q57			2SC945(A)(Q,P)	TRANSISTOR		
Q58			2SD863(E,F)	TRANSISTOR		
Q59			2SB764(E,F)	TRANSISTOR		
Q60			2SK364(GR,BL)	FET	K	
Q60 ,61			2SK364(GR,BL)	FET	EXTL	
Q62			2SC2003(L,K)	TRANSISTOR		
Q63			2SC1740S(Q,R)	TRANSISTOR		
Q63			2SC945(A)(Q,P)	TRANSISTOR		
SUB-CIRCUIT UNIT (X13-645X-XX; 0-11: K, 2-70: E, X, L, T)						
D1 -4			B30-1283-05	LED		
D10 ,11			B30-1283-05	LED		
C1 -3			CF92FV1H103J	MF	0.010UF J	
C4			CE04JW1V100M	ELECTRO	10UF 35WV	
C8			CE04JW1H010M	ELECTRO	1.0UF 50WV	
C11			C90-1827-05	BACKUP	0.047F 5.5WV	
C13			CE04JW1HR47M	ELECTRO	0.47UF 50WV	
C21 -24			CF92FV1H103J	MF	0.010UF J	
C27 -32			CF92FV1H103J	MF	0.010UF J	
C36 -39			CF92FV1H103J	MF	0.010UF J	
C40			CE04KW1E222M	ELECTRO	2200UF 25WV	
C41			CE04KW1V220M	ELECTRO	22UF 35WV	
C42		*	CE04DW1E331M	ELECTRO	330UF 25WV	
C43			CE04KW1H331M	ELECTRO	330UF 50WV	
C44			CF92FV1H103J	MF	0.010UF J	
C45			CE04KW1V100M	ELECTRO	10UF 35WV	
C46 ,47		*	C90-1821-15	ALUMINIUM ELECTROLYTIC	C.6800UF	
C48			CE04KW1V330M	ELECTRO	33UF 35WV	
C49			CF92FV1H121K	MF	120PF K	
C50			CE04KW1E101M	ELECTRO	100UF 25WV	
C51			CE04KW1V220M	ELECTRO	22UF 35WV	
C52			CE04KW1H010M	ELECTRO	1.0UF 50WV	
C53			CE04KW1V100M	ELECTRO	10UF 35WV	
C54			CE04KW1E101M	ELECTRO	100UF 25WV	
C55			CF92FV1H121K	MF	120PF K	
C56			CE04KW1C102M	ELECTRO	1000UF 16WV	
C57			CE04KW1C331M	ELECTRO	330UF 16WV	
C59		*	CE04DW1E331M	ELECTRO	330UF 25WV	
C60			CE04KW1H331M	ELECTRO	330UF 50WV	
C61 ,62			C91-0647-05	CERAMIC	0.01UF P	
C63			CF92FV1H103J	MF	0.010UF J	
C64			CE04KW1H331M	ELECTRO	330UF 50WV	
C65			CE04KW1H471M	ELECTRO	470UF 50WV	

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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C66 ,67 C68 C69 ,70 C71 C72			CE04KW1V100M CF92FV1H103J CE04JW1V100M CE04KW1E221M CE04JW1V100M	ELECTRO 10UF 35WV MF 0.010UF J ELECTRO 10UF 35WV ELECTRO 220UF 25WV ELECTRO 10UF 35WV		
C73 C74			C91-0769-05 CK45FF1H103Z	CERAMIC 0.01UF K CERAMIC 0.010UF Z	EXTL	
CN9			E10-2604-05	FLAT CABLE CONNECTOR		
△ 690 △ 690	1C 1C		L01-5471-05 L01-5472-05	POWER TRANSFORMER POWER TRANSFORMER	K EXTL	
L1 -3 X1			L40-1011-17 L78-0244-05	SMALL FIXED INDUCTOR(100UH,K) RESONATOR(4.19MHZ)		
H L	1C 1C	*	N89-3008-45 N30-3006-45	BINDING HEAD TAPTITE SCREW PAN HEAD MACHINE SCREW		
CP1 CP2 CP4 CP5 CP6		*	R90-0292-05 R90-0463-05 R90-0859-05 R90-0829-05 R90-0203-05	MULTI-COMP 100KX3 J 1/6W MULTIPLE RESISTOR 100KX9 MULTIPLE RESISTOR 100KX16 COMPOSITE ELEMENTS 220KX7 MULTI-COMP 100KX5 J 1/6W		
CP8 R74 R75 R78 R79			R90-0482-05 RN14BK2C1002F RN14BK2C5621F RN14BK2C1002F RN14BK2C1102F	MULTI-COMP 100KX4 J 1/6W RN 10.0K F 1/6W RN 5.62K F 1/6W RN 10.0K F 1/6W RN 11.0K F 1/6W		
R80 ,81 R99 R100-103			RN14BK2C1002F R92-0173-05 RS14KB3D121J	RN 10.0K F 1/6W RC 2.2M M 1/2W FL-PROOF RS 120 J 2W		
△ K1 S1 ,2	3A, 3B		S51-1052-05 S40-1064-05	MAGNETIC RELAY PUSH SWITCH(POWER,MODE)		
D5 D5 D6 -9 D6 -9 D12			HZS13N(B2) RD13ES(B2) HSS104 1SS133 HZS5.1S(B2)	ZENER DIODE ZENER DIODE DIODE DIODE ZENER DIODE		
D12 D21 -24 D25 ,26 D25 ,26 D27 -32			RD5.1JS(B2) S5566B HSS104 1SS133 S5566B	ZENER DIODE DIODE DIODE DIODE DIODE		
D34 D34 D36 -39 D41 D41			HZS5.1S(B2) RD5.1JS(B2) S5566B HSS104 1SS133	ZENER DIODE ZENER DIODE DIODE DIODE DIODE	K K	
D42 D42 D43 D44 D44			HZS3.9N(B2) RD3.9ES(B2) S5566B HZS30N(B) RD30ES(B)	ZENER DIODE ZENER DIODE DIODE ZENER DIODE ZENER DIODE		
D45 -51 D45 -51 D52 -54			HZS13N(B2) RD13ES(B2) HSS104	ZENER DIODE ZENER DIODE DIODE		

E: Europe

K: USA

P: Canada

Y: PX(Far East, Hawaii)

T: England

M: Other Areas

Y: AAFES(Europe)

X: Australia

L: Scandinavia

△ indicates safety critical components.

## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
D52 -54 D55 D56 D56 D67			1SS133 E-102 HSS104 1SS133 HSS104	DIODE CONSTANT CURRENT DIODE DIODE DIODE DIODE		
D67 FL1 IC1 ,2 IC3 ,4 IC5	3A	*	1SS133 FIP8AMW8 NJM2901N LC7570 UPC78L05J	DIODE FLUORESCENT INDICATOR TUBE IC(QUAD COMPARATOR) IC(FIP STATIC DRIVER) IC(VOLTAGE REGULATOR/ +5V)		
IC7 IC8 IC11 IC12 IC14			PST529D CXD1067P UPC7805HF M5223P * M50941-339SP	IC(RESET) IC(SERIAL-PARALLEL CONVERTER) IC(VOLTAGE REGULATOR/ +5V) IC(OP AMP X2) IC(MICROPROCESSOR)		
Q1 Q1 Q2 -4 Q2 -4 Q5			2SA733(A)(Q,P) 2SA933S(Q,R) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SB941(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q6 Q7 Q8 Q8 Q9			2SD1266(Q,P) 2SD863(E,F) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SB764(E,F)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q10 Q10 Q11 Q11 Q12			2SA733(A)(Q,P) 2SA933S(Q,R) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SC2003(L,K)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q13 Q13 Q14 Q14 Q15			2SC1740S(Q,R) 2SC945(A)(Q,P) 2SA733(A)(Q,P) 2SA933S(Q,R) 2SK163(L,M)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR FET		
A1			W02-0975-05	ELECTRIC CIRCUIT MODULE		

E: Europe

K: USA

P: Canada

Y: PX(Far East, Hawaii)

T: England

M: Other Areas

Y: AAFES(Europe)

X: Australia

L: Scandinavia

⚠ indicates safety critical components.

# L-1000T

## SPECIFICATIONS

Antenna impedance	75 $\Omega$ , Unbalanced
FM frequency range	87.5 MHz to 108 MHz
Usable sensitivity (IHF) (DISTANCE)	10.8 dBf (0.95 $\mu$ V)
50 dB quieting sensitivity (IHF) (DISTANCE)	
MONO	16.2 dBf (1.8 $\mu$ V)
STEREO	38.8 dBf (24 $\mu$ V)
Sensitivity (DIN)	
MONO: S/N 26 dB, 40 kHz Dev.	0.7 $\mu$ V
STEREO: S/N 46 dB, 46 kHz Dev.	25 $\mu$ V
Signal to noise ratio (IHF)	
MONO: (75 kHz Dev.)	92 dB (65 dBf input)
	92 dB (85 dBf input)
MONO: (75 kHz Dev.)	78 dB (65 dBf input)
	86 dB (85 dBf input)
Signal to noise ratio (DIN)	
MONO: (40 kHz Dev.)	78 dB (Unweighted 85.2 dBf input)
MONO: (46 kHz Dev.)	68 dB (Unweighted 85.2 dBf input)
Total harmonic distortion (Except Europe and U.K.) (WIDE)	
MONO (75 kHz Dev.)	
1 kHz	0.004%
50 Hz ~ 10 kHz	0.009%
STEREO (75 kHz Dev.)	
1 kHz	0.008%
50 Hz ~ 10 kHz	0.04%
Total harmonic distortion (DIN) (WIDE)	
MONO (40 kHz Dev., 1 kHz)	0.005%
STEREO (46 kHz Dev., 1 kHz)	0.02%
Capture ratio (Except Europe & U.K.)	
WIDE	1.0 dB
NORMAL	2.5 dB
NARROW	3.0 dB
Capture ratio (Europe & U.K.)	
WIDE	1.5 dB
NORMAL	3.0 dB
NARROW	4.5 dB

### Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Alternate channel selectivity (IHF)	
WIDE	73 dB ( $\pm$ 400 kHz)
NORMAL	80 dB ( $\pm$ 400 kHz)
NARROW	75 dB ( $\pm$ 300 kHz)
Alternate channel selectivity (DIN)	
WIDE	45 dB ( $\pm$ 300 kHz)
NORMAL	80 dB ( $\pm$ 300 kHz)
NARROW	70 dB ( $\pm$ 200 kHz)
Stereo separation (IHF)	
WIDE, 1 kHz	71 dB
Stereo separation (DIN)	
WIDE, 1 kHz (65.2 dBf input)	68 dB
WIDE, 6.3 kHz (65.2 dBf input)	48 dB
Frequency response	20 Hz to 15 kHz $\pm$ 0.5 dB
Spurious rejection ratio (98 MHz)	110 dB
Image rejection ratio (98 MHz)	85 dB
IF rejection ratio (98 MHz)	110 dB
AM suppression ratio	80 dB
Sub-carrier suppression ratio (IHF)	72 dB
Sub-carrier suppression ratio (DIN)	
19 kHz, 46 kHz Dev.	65 dB
38 kHz, 46 kHz Dev.	80 dB
Output level/impedance at 1 kHz, 100% Dev.	
FIXED	800 mV/100 $\Omega$
VARIABLE	0 ~ 1.6 V/100 $\Omega$
DET. OUT	0.5 V/600 $\Omega$
SIGNAL LEVEL OUT	5.0 V DC/10 k $\Omega$ (90 dBf, DISTANCE)

### General

Power consumption	35 W
Dimensions	W: 440 mm (17-5/16") H: 97 mm (3-13/16") D: 410 mm (16-1/8")
Weight (Net)	10.5 kg (23.1 lb)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

KENWOOD poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

KENWOOD strebt ständige, Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

### Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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